Volume Title: Canada-U.S. Tax Comparisons

Volume Author/Editor: John B. Shoven and John Whalley, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-75483-9

Volume URL: http://www.nber.org/books/shov92-1

Conference Date: July 26-27, 1990

Publication Date: January 1992

Chapter Title: Income Security via the Tax System: Canadian and American Reforms

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Chapter URL: http://www.nber.org/chapters/c7480

Chapter pages in book: (p. 97 - 150)

3 Income Security via the Tax System: Canadian and American Reforms

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3.1 Harmonization of Income Security?

Many aspects of Canadian economic policy, particularly in the taxation arena, can be viewed as imitating policy developments in the United States. Yet this has not been the case with respect to most income security policies in Canada, including those delivered through the tax system. Canadian and American income security policies have evolved in substantially different ways over the course of this century. There has been surprisingly little imitation beyond the implementation of unemployment insurance following the shared experience of the Great Depression. For example, the contributory Canada and Quebec Pension Plans were introduced only in 1966, more than thirty years after Social Security was implemented in the United States, and with quite different structures and goals. There are no Canadian counterparts to the American food stamp program or the earned-income tax credit. Not only has there been little imitation by Canada of U.S. income security policies, but there is also comparatively limited knowledge in the United States about Canadian developments. U.S. income security policy has drawn virtually nothing from the Canadian experience. Canadian demogrant programs of Family Allowance and Old Age Security, as well as several types of personal tax credits and benefit clawbacks, have no close parallels in the United States.

What accounts for the lack of harmonization of Canadian income security

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The author acknowledges with thanks the helpful discussions and comments on earlier drafts from Åke Blomqvist, Dennis Guest, Derek Hum, Tony Scott, John Shoven, John Whalley, and participants in the Canada-U.S. Tax Project. Elizabeth Wakerly provided skillful research assistance, and Sheila Kesselman gave expert editorial assistance. The author is solely responsible for all views and any remaining errors.

policies with those in the United States?[1] It contrasts strikingly with Canada's imitation of the United States in many other areas of economic policy, including personal and corporate taxation, deregulation of industry, and privatization of public services. One could cite fundamental cultural and historical differences, such as the stronger and more recent British and continental European ties of Canadians, both personal and intellectual. The two countries also differ in their constitutional allocation of responsibilities for the provision of income security within confederation. For example, the federal government in Canada has required constitutional amendments to pursue three of its major income security programs.[2] The United States, in contrast, has never been impeded by constitutional factors in its income security policies, though the income tax required an amendment. These varied factors are undoubtedly important. One might also consider that the economic pressures are less for Canada to conform to U.S. policies in the income security field than for other areas that are more directly affected by competitive forces.

3.1.1 Economic Reasons for Nonconvergence

It remains to be explained why there are no strong competitive pressures for Canada to imitate the income security policies of the larger neighboring U.S. economy. Such pressures might operate through any of three possible channels: 1) the tax burdens needed to finance income security and the associated pressures on business costs; 2) the incentives for international migration from a heavy tax burden and an attractive income security regime; and 3) the impact of income security provisions on the operations or costs of particular markets or industries. We shall examine each of these three possible channels of influence to see why they have not posed major constraints on Canadian income security policies.

First, there is the cost of financing income security programs and the resulting tax pressures on Canadian businesses competing with American firms in overlapping markets. The total cost of government is relevant here, not the cost of income security provisions alone. Canada has more budgetary leeway than the United States because of its lesser share of national income spent on defense. However, this surplus is more than consumed on a variety of uniquely Canadian concerns: the transport and communication costs of running a large, sparsely populated country, bilingualism and other cultural con-

1. For income security, the term "harmonization" could refer to either the total scale of such programs or their structure. Given the much larger relative size of unemployment insurance and public health insurance in Canada than the U.S., it is clear that income security has not been harmonized in the sense of total scale. The present study focuses on the structure of income security, and it is found that neither the expenditure programs nor the tax-based provisions of the two countries have been harmonized.

2. The affected programs were unemployment insurance, Old Age Security, and the Canada Pension Plan. These constitutional barriers arose because the programs were contributory-financed (OAS was initially financed by earmarked taxes). The federal government is much less constrained in providing income security through general-revenue financed programs, provisions in the tax system, and federal cost-sharing of provincial programs. See Blomqvist (1985).

cerns, and regional objectives. Health care and hospitals are almost fully in the public sector in Canada, but this also relieves businesses from the cost of providing private medical insurance.[3] Canada has less extensive urban poverty than the United States and enjoys greater equality in the pretax, pretransfer distribution of incomes.[4] Hence Canada has less need for income security provisions, even if Canadian social values might tend to promote more adequate income security. A country can pursue more ambitious distributional or other social goals through programs financed by taxes that reduce real net incomes, rather than inflate export costs. Even if some of the incremental tax burden were to fall upon export costs, flexibility of exchange rates should compensate for any competitive disadvantages.

Second, there is the possible flow of migrants into Canada, from the United States or elsewhere, if income security becomes relatively attractive on the Canadian side of the border. Similarly, Canadian workers or business people may wish to emigrate if they feel their tax burdens have become excessive. Migration flows have been a concern—regardless of whether objectively warranted—in the setting of Canadian personal income tax rates, or for that matter all taxes impinging upon real after-tax incomes of Canadian workers. Because of immigration barriers in each country, the most relevant workers are highly skilled, highly paid workers such as physicians and other professionals, star athletes and public performers, and business entrepreneurs and upper managers. These groups might be induced to migrate based on relative tax burdens but are irrelevant for most income security issues. Even the Canada-U.S. free-trade agreement has eased mobility barriers for only a select list of professions and occupations. The primary beneficiaries of most income security programs—the elderly and poorly paid, low-skilled persons—simply do not qualify under the general classification for immigration to Canada. Under the sponsored family-reunification classification, many such lesser-skilled persons may be admitted, but they are restricted from obtaining welfare payments by the required sponsor's guarantee of financial support.[5] As a result of these institutional factors, any migration-based pressures for harmonization of the general levels of income security between Canada and the United States have been quite limited to date.[6]

Third, there are the possible effects of income security programs or similar

3. This issue came up in the context of the free-trade debate of 1988, where critics claimed that free trade would place extreme pressure on Canada to abandon universal health coverage. Yet the total percentage of GDP devoted to health care costs is less for Canada than for the United States.

4. For Canadian figures see Vaillancourt (1985a); for comparative Canadian-American analysis, see Hanratty and Blank (1992).

5. They are excluded from Social Assistance for a period of years, but they may still qualify for unemployment insurance after sufficient employment and for health insurance coverage after minimal residence requirements set by the provinces.

6. Hum (1988) and Boadway and Bruce (ch. 1 in this volume) agree with this general assessment. See Sinn (1990) and Gordon (ch. 2 in this volume) for an analysis of how perfect international mobility of labor could undermine the ability of any country to pursue independent redistributive policies.

tax provisions upon economic behavior related to international competitiveness. Some income security provisions might have an impact upon particular markets or industries in Canada in ways that either handicap them or favor them in their competition with businesses on the other side of the border. They may handicap an industry by reducing the supply of workers through relatively generous levels or terms of benefits. Or they may favor the industry by tying benefits to working in the industry, even if only sporadically or seasonally, such as the Canadian unemployment insurance provisions with respect to the fishing and forestry industries. Competitive pressures will tend to inhibit Canadian policy from pursuing the former types of policies too far. Political pressures, including GATT-based and free-trade-related litigation, may be invoked when Canada pursues the latter types of policies to extremes. These industry-specific provisions of income security are most commonly contained in unemployment insurance, workers' compensation, training subsidies, and regionally directed grants to business, rather than in the income security provisions of the personal tax system.

It appears that the pressures for future harmonization of Canadian and American income security are limited primarily to areas affecting specific markets or industries.[7] Canadian policies are more likely to be constrained in this respect than are American policies. This follows both because of the relative scale of the two countries' markets and the greater power of the United States in situations of policy conflict. The most relevant programs are regional or industry-oriented provisions of unemployment insurance and possibly training offered in conjunction with income security. It could also apply to direct or subsidized employment programs having a particular impact on specific markets or industries, although these are not a significant part of the current policy landscape. Harmonization pressures are much less likely to arise with respect to tax-based provisions, such as those aimed at relieving or supplementing low incomes or differentiating tax burdens by family size. Our study proceeds with a comparative description and analysis of income security in the two countries, with a special emphasis on provisions embodied in their tax systems. Perhaps greater familiarity will encourage policy makers in each country to adopt those elements of the other country's income security system that are effective and would make sense in the home-country setting.

3.1.2 Organization of the Study

Our study first reviews the basic features of income security provided independently of the tax system, income security provisions of the personal tax system, and the interface between the tax system and independent transfer provisions. Sections 3.2 and 3.3 provide a broad-brush account of these institutions for Canada and for the United States, with more detailed treatment of selected areas reserved for the later analysis. The main part of the study as-

7. See Hum (1988) for an earlier expression of this conclusion.

sesses and compares the income security features embodied in the two countries' personal tax systems. At lower incomes, our major interest is the adequacy of benefits and their incentive effects. Tax-relieving provisions are also relevant at lower incomes. At middle and higher incomes, our major interest lies in horizontal equity and incentive effects. Particular attention is given to provisions relating to family size and characteristics such as age, disability, and marital and dependency status. In addition to the labor market incentives that are paramount for the working poor, our analyses also touch on other incentives: aggregate savings and composition; notches and poverty traps; reporting of income and evasion; timing and bunching of income; and family formation and disintegration.

The analyses are organized in terms of the structural design issues facing income security provisions. Since our central focus is on income security delivered via the tax system, we follow the main features used to design a personal tax. Section 3.4 examines the choice and definition of the tax and transfer unit. In section 3.5 we assess the appropriate tax and transfer base, that is, the measure of ability to pay taxes and need for transfers. Section 3.6 investigates important timing issues, such as payment frequency and responsiveness, and their implications for horizontal equity. Section 3.7 is an assessment of the effective marginal tax rates implied by various income security provisions in the tax system. Section 3.8 considers program simplicity and possible reasons for the undue overlap and complexity of existing income security and taxation provisions. In section 3.9 we speculate about the future evolution of income security systems in Canada and the United States and the potential role for tax provisions. We consider further the outlook for future harmonization of income security across the two countries.

3.2 The Canadian Income Security System[8]

Income security in Canada consists of general cash transfer programs, in-kind provisions and subsidies, personal tax provisions, features of other taxes, and the finance of social insurance. These various types of provisions have numerous linkages, often through their treatment in the personal tax system. We will review the primary provisions, lumping social insurance benefits under the category of general cash transfers. Some important cash transfers, such as the demogrants, will be discussed under the personal tax heading, where they can be treated under the categories of "children" and "the elderly." Only the most general descriptions are offered in this section; more detailed, but selective, analyses of particular provisions are provided in sections 3.4 through 3.8. Overview descriptions of the comparable U.S. income security provisions are provided in section 3.3. A summary of the key income security programs and related tax provisions for both countries appears in table 3.1.

8. This section draws on CCH Canadian Limited (misc. years), Canadian Tax Foundation (misc. years), and government documents describing taxation and income security programs.

Table 3.1 Summary of Key Income Security Programs and Tax Provisions, 1990

Program or Provision	Canada	United States
General Cash Transfers		
Income-tested	Social Assistance (SA)—categorical; provincial programs with federal cost-sharing	Aid to Families with Dependent Children (AFDC), Public Assistance—categorical; state programs with federal cost-sharing
	Guaranteed Income Supplement (GIS), Spouse's Allowance—for elderly; federal; some provinces supplement	Supplemental Security Income (SSI)—for elderly and disabled; federal; most states supplement
Demogrants	Family Allowances (FA), Old Age Security (OAS)	None
In-kind Transfers		
Health Care	Public medical and hospitalization insurance; universal comprehensive coverage; provincial with federal block cost-sharing	Medicare—for elderly and some disabled, limited coverage, federal. Medicaid—for the poor; state with federal sharing
Housing	Limited provision of subsidized public housing, tax credits for low-income renters, provincial and municipal	Subsidized public housing, tax incentives for private construction of low-income housing
Food	None	Food Stamps—income-tested subsidies
Child Care	Limited provision of income-tested subsidies	Limited provision of income-tested subsidies
Personal Income Tax		
Filing Basis for Couples	Individual, except that very low-income spouse is included on taxpaying spouse's return	Joint return for married couples; income fully aggregated, wider tax brackets for couples
Allowance for Filer	Nonrefundable tax credit	Personal exemption, phased out at very high incomes; also a standard deduction for filers who do not itemize their deductions
Dependent Spouse	Nonrefundable tax credit, offset by part of spouse's income; income attribution rule to deter income-splitting	Personal exemptions, phased out at very high incomes
Dependent Children	Nonrefundable tax credits	Personal exemptions, phased out at very high incomes
	Equivalent-to-married tax credits for single parents	Head-of-household tax filing status for single parents
	Tax deductibility of child-care costs	Income-related tax credits for child care costs
	Income attribution rule to deter income-splitting	Some attribution of child's income to parent's tax return (kiddie tax)
Elderly Status	Nonrefundable tax credit	Increment to the standard deduction

Table 3.1 (continued)

Program or Provision	Canada	United States
	Tax credit for $1,000 of private pension income	Nonrefundable tax credit for those with little Social Security benefits
	Registered Retirement Savings Plans and Registered Pension Plans—to tax-shelter savings for retirement	Individual Retirement Accounts—and employer-based pension plans to tax-shelter savings
Disabled Status	Nonrefundable tax credit and deduction for expense of part-time attendant needed in order to work	Increment to the standard deduction for blindness
	Tax credit for medical expense above threshold	Itemized deductions for medical expense above threshold
Refundable Credits	Refundable child tax credits and refundable sales tax credits, both income-tested	Earned-income tax credits—based on earned income and presence of child in tax unit
	Low-income, property-tax, renters, or cost-of-living tax credits, some provinces	Sales tax credits, some states
Taxability of Transfers	Taxable: FA, OAS, CPP/QPP, unemployment insurance (UI)	Taxable Social Security (half-taxable above lower-middle-income levels), UI
	Nontaxable: SA, GIS, workers' compensation, in-kind benefits	Nontaxable: AFDC, public assistance, SSI, workers' compensation, in-kind benefits
Clawback of Benefits	FA and OAS clawback above middle incomes	None
	UI partially clawed back above middle incomes	
Other Taxes		
Property Taxes	Provincial homeowners' grant or seniors' grant	State "circuit-breaker" tax reliefs
Social Insurance and Finance		
Unemployment Insurance	National program, comprehensive coverage, no experience rating; employer and employee premiums; tax credits for employee premiums	State programs, limited coverage, experience rating; entirely financed by employer premiums
Workers' Compensation	Provincial public programs, limited experience rating	State and private provision, experience rating
Retirement	Canada and Quebec Pension Plans (CPP/QPP)—retirement benefits modest, supplemented by OAS and GIS; benefits closely linked to individual's lifetime contributions; no earnings test on beneficiaries; tax credits for employee premiums	Old Age, Survivors, and Disability Insurance (OASDI) provisions of Social Security—substantial redistributive tilt to the relation between an individual's benefits and lifetime contributions; earnings test on beneficiaries

3.2.1 General Cash Transfers

Welfare payments are delivered by the individual provinces under programs of "social assistance" (SA). There are significant interprovincial variations in the eligibility requirements for social assistance, as well as the benefit levels. Some provinces, such as those in the Atlantic region, severely restrict access to benefits by single persons without dependents. Others, including Quebec, offer much lower benefit rates for young singles. However, national legislation provides for federal cost-sharing of SA programs (and related services) and also limits provincial discrimination against nonresidents and the use of waiting periods for benefits.[9] Benefits are not taxable under the personal tax due to special relieving provisions but are almost always below the levels at which income would be taxable in any event. Asset tests as well as income tests are typically applied to claimants and beneficiaries. Most provinces will disregard modest amounts of earnings but will otherwise reduce SA benefits dollar-for-dollar with increased earnings.

The most common reasons for persons receiving SA are: unemployment, if jobless benefits are low or exhausted; single parenthood or inadequate income relative to family size; and various forms of disability. Persons with disabilities may also qualify for benefits under two social insurance programs not subject to asset tests. Every province offers a program of worker's compensation for injuries incurred on the work site. These plans are financed by employer contributions, and the benefits are not taxable due to special relieving provisions. There are also limited benefits for disability under the Canada Pension Plan (CPP) and the Quebec Pension Plan (QPP), which are primarily earnings-linked contributory public pension schemes. Some of the elderly also receive supplements to their receipts from federal programs under adjuncts to the SA programs in several provinces.

Unemployment insurance is the single largest income security program in Canada. Its expenditures account for 1.7 percent of the country's GDP even in periods of high employment. The program is national in scope, but contains eligibility and benefit duration provisions that are regionally graduated. Coverage of the program is nearly universal, except for the self-employed and persons working very short hours. After a two-week jobless period, insured claimants who have worked sufficient weeks over the previous year receive weekly benefits equal to 60 percent of their average insured earnings. The maximum level of insurable earnings is somewhat above the average full-time industrial wage. Benefits are fully taxable and subject to partial clawback at higher incomes. The duration of benefits can range up to fifty weeks and hinges upon the claimant's period of insured employment and the unemploy-

9. From the inception of the Canada Assistance Plan in 1966, costs of most SA benefits and social services have been 50 percent shared by the federal government. The 1990 federal budget imposes spending restraints on CAP that may affect the sharing of costs for the three wealthier provinces. See Hum (1983) for analysis of CAP.

ment rate in the region. The UI program also encompasses benefits for sickness and maternity, as well as some work-sharing and training provisions.

3.2.2 In-kind Provisions and Subsidies

The primary forms of in-kind provision for lower-income Canadians are public insurance for hospitalization and most health care expenses; these services are in fact provided to all Canadians, irrespective of income. They are delivered by the provinces and partially financed by block transfers from the federal government. Federal legislation prevents the provinces from imposing user charges or coinsurance rates on users. Coverage under these schemes is virtually universal across the population. Only the two westernmost provinces still charge premiums for participation in their medical-care insurance schemes; Ontario abandoned such charges just in 1990 and replaced them with a payroll tax. Persons receiving SA obtain a waiver from paying premiums, and almost no one is denied service even if uninsured. The financial pressures of such an open-ended arrangement have forced provinces to limit the range of covered services and have led to significant waiting periods for some medical and surgical procedures. Many provinces also reimburse a portion of prescription drug costs above a threshold; most provinces reduce or waive the deductible for SA recipients and the elderly.

Outside of health care, Canadian in-kind public provisions and subsidies are less extensive than in the United States.[10] Public supply of housing and child care is quite limited, even for low-income families. There is somewhat greater reliance on private nonprofit groups to supply day care, and on cooperative societies and subsidized private builders to supply low-income housing. SA recipients may receive additional benefits or subsidies to help pay unusually high rental costs or to cover day care costs to facilitate their employment. Many provinces will also provide discretionary amounts under Social Assistance for special needs such as children's winter clothing. Some provinces provide income-tested subsidies for day care expenses to persons who are not SA beneficiaries. Nonprofit day care centers may receive capital grants or other provincial funding. Several provinces provide income-tested tax credits to renters as part of the personal income tax. As previously noted, Canada has no food stamp program, although volunteer-run food banks have grown in recent years.

3.2.3 Personal Tax Provisions

The Canadian personal income tax is imposed at both the federal and provincial levels, with nine of the ten provinces piggybacking their taxes onto the

10. This study does not examine public education or higher education, despite their obvious links with poverty and income security. Public education in Canada is more uniform in quality across low- and high-income neighborhoods and municipalities than public education in the U.S., on account of extensive provincial financing. College and university tuitions are significantly lower in Canada than in most of the United States, although attendance is more limited and probably more biased toward students with higher class origins than in the U.S.

federal tax; only Quebec imposes its provincial income tax separately. The individual is the basic unit for taxation in all jurisdictions, with adaptations to include in a tax filer's return the low earnings of a dependent spouse and children. Spouses and children whose incomes exceed modest levels are accountable for their own personal tax returns. Canada has pioneered many types of tax credits that serve income security objectives for the poor and horizontal equity goals for the broader taxpaying population. The 1987 tax reforms further extended the use of nonrefundable tax credits to replace personal exemptions and many items that were formerly deductible (see Cloutier and Fortin 1989). Because provinces apply their taxes at 47 to 62 percent of the taxpayer's basic federal tax, the total value of the nonrefundable credits is correspondingly magnified.[11] Our review of these provisions and related income transfer programs is classified by four demographic groups—nonaged adults, children, the elderly, and the disabled.

Nonaged Adults

Every person who files a tax return in Canada can claim a nonrefundable tax credit. These personal tax credits replaced personal exemptions in the country's major tax reforms of 1987, which first became effective with the 1988 tax year.[12] A nonrefundable credit for the filer can be made equivalent to a personal exemption through appropriate adjustments to the income-break points for the progressive tax rate schedule. The Canadian reforms made the conversion from exemptions to credits more valuable for low-income tax filers and less valuable for high-income filers. The nonrefundable credits for filers also replaced a deduction intended to cover employment expenses. Hence, the credits now are the sole tax-relieving device for low-income filers in Canada; there is no standard deduction or other such provision. In 1988 the basic filer's tax credit was set at $1,020; the basic tax exemption for a filer would have been about $4,270 if the previous system had been continued. (All amounts for Canadian tax and spending provisions in this study are given in Canadian dollars; all amounts for U.S. provisions are in U.S. dollars.) The levels of the two provisions are not directly comparable because the federal tax rate schedule was also collapsed from ten brackets to three—17, 26, and 29 percent. Still, the taxable income threshold was increased by the reforms. Tax credits and boundaries on the rate brackets are indexed annually for inflation, to the extent that it exceeds 3 percent.

11. Basic federal tax is an amount prior to reduction by the *refundable* federal credits. Hence, the refundable federal credits do not assume additional value with provincial taxation.

12. In the tax years from 1965 through 1985, Canada also had a wide variety of nonrefundable tax credits provided as "general tax reduction." These were usually a stated percentage of federal tax otherwise payable, with a minimum and/or maximum amount of credit; in some years there was a flat amount per filer and spouse, and in 1977 and 1978 an amount per child was added. See Kesselman (1979) for analysis of these credits and the refundable child tax credits.

Married persons with relatively low incomes are claimed on their spouses' return but must file separate returns if they have a taxable level of income. The filing spouse can claim a marital tax credit, which is a maximum amount ($850 in 1988) reduced by a portion (17 percent) of the dependent spouse's income above a disregard level. This marital credit phases out to zero at an income at which the dependent spouse must file a separate return. A single parent can also claim an "equivalent to married" credit on behalf of the first child. Many deductible or creditable expenses in the income tax can be transferred to a spouse or supporting parent when the spouse or child is unable to claim the full amount on account of insufficient taxable income. Hence, there is a limited degree of income-splitting for low-earning spouses and children, in a variety of circumstances. However, there are extensive income attribution rules to inhibit the splitting of investment incomes for tax purposes through intrafamilial transfers of assets.

Refundable sales tax credits are offered to offset a portion of the federal manufacturers' sales tax, which enters the prices of many consumer goods. These credits predated the 1988 reforms by several years. They can be claimed by lower-income tax filers, or a short tax return can be filed by nontaxable persons to claim their credits. The RSTC is specified as a given amount per adult plus a given amount per child in the household; this maximum total is reduced by 5 percent of the couple's combined net income exceeding a threshold ($18,000 in 1990). The maximum will be enriched and the phaseout threshold greatly increased in 1991, when the credits will be renamed the Goods and Services Tax (GST) credits. The goal is to offset the increased federal sales tax burdens at lower incomes when the tax is converted to a value-added tax format. Indexation for inflation above 3 percent annually will be applied to the credit amounts and phaseout threshold.

Dependent Children

The Canadian tax and transfer treatment of dependent children is a web of overlapping and interacting provisions. First are the nonrefundable child tax credits for children, claimable by a supporting parent and reduced by a portion of a child's income above a disregard level. The credits assume different values for the first two children under 19, other children under 19, and infirm dependents 18 and older. These credits replaced tax exemptions for dependent children in the 1988 tax year. Second are the child credits within the RSTC, which will be enlarged with their replacement by refundable GST credits in 1991. Third are the refundable child tax credits (RCTC), which were introduced in 1978 and formed the model for the later RSTCs. Fourth are the Family Allowance demogrants, monthly payments of about $33 for each child, irrespective of family income. The FA payments have been taxable to the higher-income parent for many years. Beginning in the 1989 tax year and fully implemented by the 1991 tax year, FA payments are further subject to complete clawback as either parent's income rises above $50,000. There are also tax deductions for child care expenses of working parents and a recently introduced small tax credit for minding one's own child at home.[13]

Quebec uses both tax and spending powers to operate the continent's only pronatal policy. This reflects the province's desire to maintain its Francophone population in the face of low birth rates. Following the national tax reforms, Quebec converted from personal exemptions to nonrefundable personal credits in reforming its own tax in 1988. However, in Quebec the credit per child is nearly 40 percent of the filer credit, whereas federally the child credit is only 6 to 13 percent of the filer amount. Quebec provides provincial family allowances in addition to the federal payments, and it gears these payments to favor larger families. The province further supplements its family allowances with "availability allowances" paid to families with children under age six; these increase sharply with the family's number of children of all ages. Quebec also provides lump payments, in installments, for newborn children. In late 1989 these were $500 for the first child in a family, $1,000 for the second child, and $4,500 for the third and each subsequent child. None of these provincial payments is taxable or subject to clawback.

The Elderly

The elderly also face a combination of tax and transfer provisions aimed at income security. First is the nonrefundable tax credit for persons aged 65 and over, which replaced a comparable tax deduction for age. This amount ($550 in 1988) is in addition to the basic filer's credit and can also be claimed for an elderly spouse. Second is the federal demogrant program of Old Age Security, which makes payments to all elderly Canadians who have met a minimal residence requirement. Monthly benefit levels in 1990 are over $340 per elderly person. OAS payments are taxable and have further become subject to clawback, beginning in 1989, for recipients with incomes above $50,000. Third is the federal Guaranteed Income Supplement, which acts like a guaranteed income for the elderly. Maximum monthly benefits are over $400 per single person and $520 per couple; payments are reduced by 50 percent of the recipient's other income (excluding OAS). Fourth, many provinces supplement GIS payments for very low income seniors, and their phaseout rates can increase the total effective marginal tax rate to 75 or 100 percent, depending upon how they are combined with the GIS benefit reduction rate.

Other tax and social insurance provisions are aimed at savings for retirement. The first $1,000 of a taxpayer's annual pension income from private sources obtains a credit at the bottom-bracket rate; prior to the 1988 tax year there was a deduction instead. Consumption tax treatment is given to specified

13. Child care expenses are deductible against earned income of the lower-income parent in the federal and most provincial income taxes; in the Quebec income tax, they can be deducted by the higher-income parent.

amounts of savings through employers (Registered Pension Plans) and through private trusteed accounts (Registered Retirement Savings Plans). Reforms originally announced in 1986 and now being implemented will provide a more balanced treatment of permitted amounts of savings through these two vehicles, as well as between defined-benefit and money-purchase pension plans. Tax deferral will be allowed on 18 percent of a taxpayer's earned income up to an annual limit of $15,500 of savings in 1995, which will be indexed for subsequent growth of average wages. The Canada and Quebec Pension Plans are mandatory contributory public pension schemes. CPP/QPP benefits are roughly proportional to the contributor's lifetime contributions. Benefits are paid without any earnings test but are fully taxable. The schemes are partially funded, with most assets in the form of loans to the provinces.

The Disabled

In addition to the Social Assistance payable to most unemployable disabled persons, there are also tax provisions to relieve the position of the taxable disabled. An additional tax exemption amount was converted to an additional credit of $550 for disability in 1988. The definition of disability for this credit has been broadened from a narrowly prescriptive one (blindness or confinement to a wheelchair or bed) to a much broader functional one ("markedly restricted in activities of daily living"). Disability must be certified by the claimant's physician. Disability credits are nonrefundable but can be transferred to the tax return of the disabled person's spouse or supporting parent. Medical expenses exceeding 3 percent of the taxpayer's net income can be claimed for a nonrefundable credit computed at the bottom-bracket rate; this provision replaced the former tax deduction for such expenses. The medical expense credit is available to all taxpayers and can be claimed by the lower-income spouse with respect to the entire family's medical expenses. In 1989 the working disabled were granted a deduction of up to $5,000 for the expenses of a part-time attendant required to enable an individual to work.

3.2.4 Other Taxes and Social Insurance Finance

Some of the provinces offer tax relief for persons at lower incomes through income-conditioned credits to offset sales taxes, property taxes, or the presumed property tax component of residential rents. Others offer grants to offset part of the property tax, in some cases with an additional amount for elderly homeowners. Many U.S. states provide similar "circuit-breaker" relief of property taxes to elderly or poor homeowners through refundable income tax credits. The provincial share of financing for hospitals and medical care comes out of general revenues, but several provinces have imposed payroll taxes on employers earmarked for health spending. Provincial programs of workers' compensation are financed by levies on employers; some provinces apply different rates by industry or even a limited form of experience rating by firm. Several provinces also relieve individuals from paying any income tax at a somewhat higher level of income than the tax threshold for the federal personal tax. Quebec parallels many of the nonrefundable credits from the federal income tax in its provincial tax.

The federal social insurance programs are almost fully premium-financed. Although the UI program had substantial general-revenue financing in the early 1970s, this was reduced in the later 1970s and eliminated in 1991. Employer premiums are 1.4 times employee premiums; both are based on insurable earnings up to a ceiling that somewhat exceeds the average full-time industrial wage. Finance of the Canadian UI program utilizes no experience rating, although the idea has periodically been entertained (see Kesselman 1983; Cousineau 1985). The Canada Pension Plan is financed by premiums applied equally to employers and employees. In 1990 the rates were 2.2 percent for each party on annual earnings between an exempt level of $2,800 and a ceiling of $28,900. Premium rates are scheduled to rise steadily over the next generation to maintain the program's financial viability. Still, the overall Canadian income security system for the elderly relies much more heavily than the U.S. system on general-revenue financed programs, such as OAS and GIS. This balance tilts the Canadian system sharply toward a pay-as-you-go basis, despite the partial degree of funding of the CPP/QPP programs.

Although receipts of UI and CPP benefits are taxable, benefits from workers' compensation programs are not. For UI recipients whose annual income exceeds 1.5 times the program's maximum annual insurable earnings, benefits are subject to a clawback of up to 30 percent through a provision in the income tax. This provision predates the clawbacks recently imposed on FA and OAS receipts at higher incomes. The employee's UI and CPP premiums receive nonrefundable credits at the bottom-bracket tax rate. Prior to the 1988 tax year they were deductible in the personal income tax. Employers' shares of these premiums are fully deductible from personal and corporate income taxes.

3.3 The U.S. Income Security System[14]

3.3.1 General Cash Transfers

The individual states provide welfare payments under programs of public assistance, particularly for families with dependent children. Federal rules establish the general requirements for eligibility under Aid to Families with Dependent Children, including income and asset tests and prohibition of residence requirements for citizens. The federal government matches state welfare costs, with the federal share inversely related to a state's financial resources. As in Canada, there are significant interjurisdictional variations in the benefit levels. Most welfare recipients are also eligible for Medicaid, food

14. This section draws on Commerce Clearing House, Inc. (misc. years), U.S. Advisory Commission on Intergovernmental Relations (1990), Rejda (1988), MacDonald (1977), and government documents describing taxation and income security programs.

stamp, and social service benefits; where locally available, public housing, energy assistance payments, and reduced-price or free school lunches may also be obtained. The states typically impose work requirements on employable beneficiaries, ranging from work tests to subsidized employment to community service. For an initial period, a beneficiary may keep $30 plus one third of monthly earnings; after that period, any earnings reduce benefits dollar-for-dollar.

Disability and old age are other conditions that the states cover in their income security provisions. Every state has a workers' compensation law for employment-related injuries. Unlike the monopoly operation of workers' compensation by the Canadian provinces, most states allow employers to purchase policies from a private insurer or to self-insure. Some states also allow the purchase of insurance from a competitive state fund, and a few make coverage elective for firms. Most of the states provide income-tested benefits to supplement federal programs for impoverished elderly and disabled persons. Social Security has two major cash benefits: the earnings-related Old-Age, Survivors, and Disability Insurance program, and the income-tested Supplemental Security Income program. These federal programs are reviewed later in this section, along with relevant taxation provisions for the elderly and disabled.

Unemployment insurance is delivered as a series of state programs with partial financing through federal tax rebates to the states against a federal payroll tax on employers. Receipt of these rebates by a state is contingent upon meeting certain federal minimum standards and the use of experience rating in the UI payroll taxes imposed on individual firms. The states use several experience-rating methods, most of which set upper and lower bounds on the rates paid by any firm, regardless of how high or low its layoff rate has been. During some years the federal government has also enacted special programs to extend the period of regular unemployment benefits, based on high unemployment. Few states require any employee contributions. Coverages of the state plans are typically less comprehensive than the Canadian scheme. Average benefit rates are somewhat lower, as are benefit durations, and most states will completely deny benefits to workers who have voluntarily left their jobs. Total expenditures on UI in the United States account for just 0.3 percent of GDP, less than one-fifth of the corresponding figure for Canada.

3.3.2 In-kind Provisions and Subsidies

Limited health care insurance is provided to the aged, disabled, and poor under two governmental programs. The federal Medicare program covers all of the elderly and the disabled who have drawn long-term Social Security benefits. It provides partial insurance for inpatient hospital care and limited home health-care services; it also offers a voluntary, supplementary medical insurance plan for doctors' services and outpatient care. None of these benefits is income tested, but there are various deductibles and coinsurance charges. The supplementary plan has monthly charges for participation. Medicaid is a series of state programs with federal cost-sharing inversely related to a state's per capita income. It covers most of the health care costs of welfare recipients and of most persons drawing income-tested benefits under the federal Supplemental Security Income program for the aged and disabled. States may also extend coverage to medically needy persons who are not beneficiaries of welfare or SSI.

Although general welfare benefits are quite low in many states, they are usually supplemented by access to several in-kind benefits and subsidies. In addition to the cited health care benefits for the poor, these include food stamps, public housing, child care subsidies, energy assistance, and free or reduced-price school lunches. All these benefits are provided on an income-tested basis; often the person must be eligible for welfare to obtain the other benefits. The linkage of benefits and sequencing of income tests can create very high cumulative effective marginal tax rates, or what has been called the "poverty trap." None of these benefits nor the public health care benefits constitute taxable income, as they are already income-tested. Note, however, that most welfare recipients do not receive all of these in-kind benefits. Some are not available in every state or locale; and some, such as public housing, may be rationed by waiting lists as well as income tests. Many persons who do not qualify for welfare are still eligible for food stamps.

3.3.3 Personal Tax Provisions

The 1986 Tax Reform Act constituted a major rewriting of the U.S. code for personal income taxation. Some of its provisions were first operative in the 1987 tax year, with others phased in over several years. Forty states also impose broad-based personal income taxes that they administer themselves. Many state tax provisions are linked to the federal tax concepts and therefore were automatically recast with the federal reforms. Other states have explicitly redrafted their laws to conform with the broadened taxable base in the federal tax. Several state income taxes use nonrefundable credits instead of personal exemptions. The federal tax collapsed its rate structure to two positive rates of 15 and 28 percent; there is also a 5 percent surtax at upper-income levels.[15] While the federal reforms were primarily aimed at broadening the taxable base to facilitate the rate reductions, a number of the changes have an impact upon income security and horizontal equity. We will review these changes for the same four demographic groups as we did for the Canadian tax reforms. Income transfer programs aimed at the elderly and disabled are also covered.

15. In 1989, only a few states had top marginal tax rates as high as 10–12 percent. Because state income taxes are an itemized deduction in computing an individual's federal tax, only a handful of people faced total federal-state marginal rates exceeding 40 percent.

Nonaged Adults

Personal exemptions are allowed for each tax filer, spouse of the filer, and dependent child.[16] The reforms raised the amount of the per capita exemption from $1,080 in 1986 to $1,900 in 1987, with phased increases to $1,950 in 1988, $2,000 in 1989, and indexation to consumer prices for later years (yielding $2,050 in 1990). A 5 percent surtax is imposed above specified income levels to tax back first the benefits of the 15 percent rate bracket and then the benefits of personal exemptions. This surtax creates an additional effective rate bracket, of 33 percent, in the middle of the 28 percent bracket.[17] The tax further allows a standard deduction for filers who choose not to claim itemized tax deductions for allowable expenses. For the 1990 tax year, the standard deductions were $3,250 for single filers, $5,450 for married couples filing jointly ($2,725 if filing separately), and $4,750 for household heads. The standard deductions are a vital element in setting the minimum taxable threshold at lower incomes.

Four distinct rate schedules apply to the following groups: single persons, married persons filing jointly, married persons filing separately, and heads of households. After the 1986 reforms, all filers face the same rates (15 and 28 percent), but the applicable income brackets differ by group. Joint filing is most common among married couples and confers tax savings when the incomes of the two differ substantially. For couples with similar incomes, the system imposes a higher tax burden than the two would face if unmarried. Prior to the 1986 reforms there was a second-earner deduction (10 percent of the lower-earning spouse's earnings up to $30,000) to mitigate this "marriage penalty." It also served to moderate the higher marginal tax rate facing the lower-earning partner under joint filing. The 1986 reforms eliminated the second-earner deduction, on the rationale that married couples would be compensated by adjustments to the standard deduction and the rate schedule. Unmarried heads of household enjoy a larger standard deduction and a more favorable rate schedule than single persons.

Dependent Children

As already noted, a dependent child generates an exemption of $2,050 that can be claimed by a supporting adult. This is subject to the 5 percent surtax to

16. From 1975 to 1978, the U.S. provided a "general tax credit," which in 1978 equaled the greater of $35 for each personal exemption or 2 percent of the first $9,000 of taxable income. The credits were nonrefundable and in addition to the $750 per-capita personal exemptions. In 1978 the president proposed to replace all of these provisions with nonrefundable per-capita credits of $240, but Congress instead raised the personal exemptions to $1,000 in 1979. For background analysis, see Danziger and Kesselman (1978).

17. Benefits of the 15 percent bracket are recovered above 1990 taxable incomes of $47,050 for a single filer, $67,200 for a head of household, and $78,400 for joint married filers. The personal exemptions are recovered only above taxable incomes of $97,620 for a single filer, $134,930 for a head of household, and $162,770 for joint married filers.

recover the tax savings at very high family incomes. The 1986 reforms precluded a child from claiming a personal exemption on the child's own tax return if he or she could be claimed as a dependent on another's return. Such a child may still use up to $500 of his standard deduction to offset his unearned income, and his full standard deduction to offset his earnings. Unearned income over $1,000 of children under age 14 has become taxable at the parents' marginal tax rate—the "kiddie tax." The 1986 tax act included sweeping changes to the taxation of trusts, in particular grantor trusts and generation-skipping trusts. These reforms have severely curtailed the ability of families to shift taxable incomes to members in lower rate brackets. They also have increased the tax filing requirements for children and the number of children who have to pay taxes on their earned incomes.

Two U.S. tax credit provisions are linked to the presence of dependent children. These predate the 1986 reforms and survived with minor changes to their credit and phaseout levels. First is the earned-income tax credit, which is a refundable tax credit based on earnings of tax units with at least one dependent child (see Steuerle 1990). For the 1990 tax year the EITC could be claimed by a supporting adult at a rate of 14 percent on the first $6,810 of earned income (for a maximum credit of $953). The credit is phased out at a rate of 10 percent for incomes between $10,730 and $20,264 in 1990. Claimants can file certificates with their employers to have an advance portion of the EITC added to their paychecks throughout the year. Second is the provision of nonrefundable credits for dependent-child-care expenses of working parents. The credit rates decline with increase in the adjusted gross income of the claiming tax unit. In 1990 the credits were 30 percent of allowable expenses for filers with incomes of $10,000 and less, declining to 20 percent of expenses for filers with incomes above $28,000. As in Canada, these tax provisions for child care expense are applied to the earnings of the lower-earning parent.

The Elderly and the Disabled

Several of the key U.S. tax and transfer provisions are similar for the elderly and the disabled. For persons who are elderly or blind, extra amounts can be claimed along with the standard deduction. For the 1990 tax year these increments were $800 for age or for blindness ($1,600 for age *and* blindness) for a single filer and $650 for each person over 65 or blind for joint married filers (that is, $2,600 where both are blind and aged). Prior to the 1986 reforms, age and blindness were handled with personal exemptions. The earlier approach benefited even very high-income filers, who typically itemize their deductions rather than take the standard deduction. There is also a nonrefundable tax credit for the elderly receiving little or no Social Security benefits and for the totally disabled receiving disability income. The credit is 15 percent of specified base amounts, depending upon the claimant's filing status, reduced by the nontaxable Social Security and pensions received.

Certain tax deductions are potentially available to all filers but have particular relevance to the situation of the elderly and the disabled. Deductions for medical care expenses can be claimed along with other itemized deductions in lieu of the standard deduction. The 1986 reforms raised the threshold for medical care claims to 7.5 percent of the filer's adjusted gross income, from the former 5 percent floor. The reforms also severely limited the tax deductions available for savings in Individual Retirement Accounts. Now such deductions are confined to low- and moderate-income taxpayers; upper-income taxpayers can deduct up to $2,000 of IRA contributions in a year only if neither the taxpayer nor the spouse is an active participant in a qualified pension plan. Tax-sheltered treatment remains on saving undertaken within qualified employer-based pension plans.

The Social Security program provides two major types of cash benefit programs for the elderly and the disabled, one contributions-related and the other needs-based. Old Age, Survivors, and Disability Insurance offers benefits related to a claimant's insured earnings over his or her working life.[18] The benefit formula for OASDI is highly skewed in favor of persons whose "average indexed monthly earnings" over their working lives were quite low. A special minimum benefit for low-income workers with long coverage lends a further redistributive tilt to the program. Beneficiaries under age 70 face an earnings test, which reduces benefits by 50 percent of earnings above a threshold; in 1990 the earnings offset was reduced to one-third for beneficiaries between ages 65 and 69. Supplemental Security Income provides income- and assets-tested benefits for the aged, blind, and disabled. Payments can be made irrespective of the claimant's work history. The maximum benefits are quite low and are further reduced by 50 percent of earnings above a small disregard level. Most states supplement the federal SSI payments.

3.3.4 Taxation of Benefits and Social Insurance Finance

None of the income-tested cash benefits, such as welfare and SSI, and no in-kind public benefits or subsidies constitute taxable income in the United States. This avoids the compounding of effective marginal tax rates that would result by taxing benefits that had already been subject to an income test. Workers' compensation benefits are similarly nontaxable, even though they are not subject to an income test.[19] If these benefits, or any of the others, were to be made taxable, some upward adjustment of benefit rates would be required to maintain their adequacy on an after-tax basis. The 1986 reforms made all unemployment insurance benefits received taxable. Previously, there had been

18. The original 1935 act covered retirement benefits for the aged; benefits for survivors, disability, and Medicare were introduced over the following thirty years. Medicare was discussed earlier, and we do not review the survivors' benefits here (as in the CPP, benefits may be paid to survivors of insured persons under certain circumstances).

19. Most disability pensions financed by employers are taxable in Canada and the U.S. Note that both countries exclude from tax the receipt of damages for physical injury or death.

an exclusion from tax of jobless benefits for persons with incomes below specified thresholds ($12,000 for single filers and $18,000 for joint filers). Since 1984, OASDI Social Security benefits have been partially taxable to households with incomes above specified thresholds ($25,000 for single filers and $32,000 for joint filers; neither has been indexed). Taxable income includes the lesser of one-half of benefits or one-half of income (including half of benefits and all of nontaxable interest income) above the threshold. One justification for the half-inclusion rate was that beneficiaries had never paid tax on the employer share of Social Security premiums.

Finance of UI and workers' compensation was discussed earlier. We now turn to the finance of the other social insurance programs. The SSI component of Social Security is financed out of federal general revenues. Like the Canadian public pension scheme, the U.S. scheme is well short of being fully funded. The OASDHI component is financed by equal premiums on employers and employees. Contribution rates in 1990 for each party were 7.65 percent of a worker's wages and salaries up to $51,300, for a maximum total payment exceeding $7,800 (nearly eight times the comparable maximum for CPP). The employer premiums are deductible under the business's income tax, but employee premiums receive no recognition in the personal tax. Contributions cover both cash benefits of OASDI and the Hospitalization Insurance portion (Part A) of Medicare. The Supplementary Medical Insurance portion (Part B) of Medicare, is financed about one-quarter from the SMI premiums and the balance from general revenues. The United States also enacted a surcharge on the federal income tax of persons covered by Part A Medicare at 15 percent of their tax in 1989 (to a maximum surcharge of $800 per affected person), with scheduled rises to 28 percent in 1993. This "Medicare tax" would have been used to finance coverage for catastrophic illness and prescription drugs, but it was repealed before coming into effect.

3.4 The Tax and Transfer Unit[20]

Defining the benefit unit for income security serves many of the same objectives as choosing the tax unit for personal taxation. The primary goal is to choose groups across which relative well-being can be assessed, so that income support or tax relief can be appropriately targeted. Achieving this horizontal-equity goal is inextricably linked with the measure of well-being (usually some variant of income) and timing and accounting issues; these topics are treated in the following two sections. A benefit unit is usually taken as a group of persons across which there is some presumption that income and

20. For the analytical foundations of this and the following two sections, see Kesselman (1982, 1990b) and the references cited therein. Danziger and Kesselman (1978) and Kesselman (1979) are relevant to the present section; Pechman and Engelhardt (1990) also overlaps with some issues in this section.

other resources will be shared. Typically the group will be residing together, although in some cases separated married persons may be treated together. Once the benefit unit has been defined, it must be determined how income security benefits and tax-relieving provisions should be scaled for different types and sizes of units. In addition to equity objectives, attention must be given to the ease of tracking and aggregating incomes within the benefit unit and coordination with the unit used for personal tax purposes.

3.4.1 Functional Aspects of the Unit

Inconsistency of Tax and Transfer Units

Both Canada and the United States take some version of the nuclear family as the appropriate benefit unit for most income security programs, whether cash or in-kind. Social insurance programs traditionally operate more with the individual as both the contributory and the benefit unit, but there have been many compromises on the benefit side. Some features have been based on concerns over targeting benefits effectively, while others have been justified by a family-need concept of the socially insured contingency. In the early 1970s, the Canadian UI program offered a higher benefit rate for jobless claimants with one or more dependents. OASDI retirement benefits are increased by 50 percent for the spouse of a retired worker, even if the spouse never worked or made payroll contributions. Most survivor benefits under OASDI and CPP also take into account the financial situation of the surviving family. The American food stamp program operates on the basis of an "economic unit" in which there are sharing of common cooking facilities and joint purchasing of food; this sometimes departs from the welfare unit. Federal SSI benefits are reduced by one-third for beneficiaries who live in another person's home and receive support and maintenance there.

As previously noted, the U.S. income tax allows married couples to file jointly. Most of the states also permit some form of joint income tax filing. The Canadian tax allows joint filing only when one partner or a dependent has income below the taxable level. Hence, the taxable threshold in Canada has something of a family basis. Otherwise the Canadian tax uses an individual tax unit. Yet when income support provisions are included in the personal tax system, there are areas in which it uses family rather than individual income. Canadian refundable tax credits for children and for sales taxes each abate above an income threshold, which is applied to the joint incomes of the parents when both are present. In 1990, the thresholds for these phaseouts were $24,750 and $18,000 for the child and sales tax credits, respectively. With conversion of the sales tax credit to a Goods and Services Tax credit in 1991, the threshold increases to $24,800, but it will still be applied to a couple's combined incomes. The phaseout rate on each of these credits for incomes above their thresholds is 5 percent.

Income Aggregation in the Unit

One functional aspect of defining the tax or transfer unit is to determine for which persons income will be aggregated to assess tax liability or benefit entitlement. With a progressive-rate income tax, an individual unit induces persons to split or average their incomes across family members. The use of a family unit may avoid creating these incentives, but it may affect incentives for persons to be married, depending upon the differential tax treatment of single and married persons.[21] Most income security provisions impose income tests with high marginal tax rates on persons at the lowest incomes. When these provisions overlap the personal income tax, they join at the relatively low marginal rates of the bottom bracket. Hence, individuals in a family group would like to segregate all of their income in the hands of one member, so that the others can maximize their benefits. The purpose of a family benefit unit is to track and measure all members' incomes so that they can be counted as joint resources in the computation of need. However, incomes of common-law or more casual partners may be difficult to track and to assess as a family resource for benefit purposes. Common-law relations are most often excluded from the *tax* definition of married status in both countries, based on legal tradition and respect for privacy.

Use of the individual tax unit in Canada places considerable pressure on tax enforcement to prevent the shifting of incomes or income-generating assets between spouses. A variety of income-attribution rules on transferred assets has been used to reduce the opportunities for income splitting. The United States introduced a "kiddie tax" and denied personal exemptions to dependent children on their own tax returns to reduce the opportunities for parents to shift taxable income from assets to their children. One could alternatively expand the U.S. tax unit from the married couple to include children, but doing this would raise the marginal tax rates on the work earnings of many children. Both countries further extend the family tax unit beyond marriage to separated or divorced couples. In most circumstances, court-ordered alimony payments in the United States (and in Canada, maintenance payments as well) are deductible to the payer and taxable to the recipient, thus splitting the income. In the 1988 tax year, Canada extended the same tax treatment for maintenance to separated common-law spouses.

An anomaly arises in the income aggregation for the clawback on Family Allowance and OAS payments introduced in Canada in the 1989 tax year.[22]

21. Income aggregation and the definition of the tax unit also have economic efficiency implications with a progressive tax rate schedule; see Boskin and Sheshinski (1983).

22. The FA and OAS clawbacks were phased in over three years; in 1989 up to one-third of the benefits were clawed back, and by 1991 up to 100 percent of benefits have been recouped. The UI clawback, in contrast, is limited to 30 percent of benefits received; its threshold is just under $50,000 in 1990.

Family Allowance receipts are clawed back at 15 percent of the *higher-income parent's* net income exceeding $50,000 per year. Hence, a two-income family with total net income of $100,000 split equally between the partners will repay none of its FA, whereas a single-income family with net income at all above $50,000 will bear the clawback. This failure to aggregate incomes for the clawback is a departure from the type of aggregation used for determining refundable child and sales tax credits; it would appear to be a violation of horizontal equity, as the concept is normally applied on a family basis for income security. Indeed, the income aggregation for the refundable credits is extended even to the unmarried parents of a child. OAS receipts are also clawed back at a rate of 15 percent, but the clawback applies to net income above $50,000 of the adult receiving the payment.

Scaling of Benefit Provisions

Benefit levels of transfer programs, tax-relieving provisions, and tax-based transfers can be scaled in a variety of ways. The main methods include a per-capita basis, scaling by family size, and recognizing dependency or family relationships. The income-tested transfer programs, including welfare, in both countries use variants of the family-size approach in setting maximum benefit levels. This approach reflects the scale economies of family living and the horizontal-equity notion of equalizing the well-being of different-size family units at the bottom of the income scale. Social insurance programs typically scale their benefits to the contributory earnings level of the beneficiary, although they sometimes make adjustments for family size or need in particular areas, such as survivor benefits. The Canadian demogrant programs of FA and OAS use a per-capita method (in 1990, monthly benefits of about $33 per child and $345 per aged person). However, individual provinces may vary the payment pattern for FA benefits to reflect the number of children in a family or their ages. And there is an income-tested Spouse's Allowance for spouses of OAS recipients and widowed persons aged 60–64.

Tax-relieving provisions are designed to exclude low-income persons from paying personal income taxes. When Canada converted from personal exemptions to personal credits beginning with the 1988 tax year, it kept the scaling based upon age and family size and relationship. In 1990, the levels of these credits were as follows: basic filer, $1,049; married, $874; first two children under age 19, $68 each; other children under 19, $136 each; infirm dependents 18 and older, $257; and elderly or disabled, $566. These credits offset tax that would otherwise be paid; at the bottom-bracket rate of 17 percent, the basic filer credit is equivalent to a personal exemption of $6,169.[23] The United States employs the per capita method for all personal exemptions, with a 1990

23. On tax returns the personal credits are actually specified as exemption-equivalent amounts, and along with other creditable expenses, the filer multiplies their total by the bottom-bracket rate of 17 percent to compute the credit amount.

level of $2,050 per adult or child in the family.[24] As reviewed earlier, the standard deduction plays an important role in setting tax relief for low-income families. The extra exemptions for age and disability were converted to additional amounts of standard deduction under the U.S. reforms.

Both countries provide single-parent households with added relief to reflect their additional needs for living costs. Canada allows single-parent families to claim "equivalent-to-married" credits (equal to marital credits) on behalf of the first dependent child, instead of the much lower child credit amount. The United States allows unmarried heads of household to claim a larger standard deduction and to file under a more lenient tax schedule than single persons. In 1990 these features raised the taxable threshold by $1,500 (plus exemptions for dependents) and reduced taxes due on taxable incomes above $19,450. Note that both countries also extend these provisions to single or separated adults who support an adult relative in their own home.

Transfers delivered through the tax system can also be scaled in various ways. The Canadian refundable tax credits for children and sales tax are both on a per capita basis but differentiated by age. Child tax credits in 1990 were $575 per child. A supplement to the credit of $200 per child under age seven is also available, but this supplement is reduced by 25 percent of deductible child care expenses. The sales tax credits have different values per adult and per dependent child; with their expansion to offset the Goods and Services Tax in 1991, they are scheduled to be $100 per child and $190 per adult.[25] Payment of the earned-income tax credit in the United States is conditional upon the presence of one or more dependent children in the home of the filer. The amount of the credit is proportional to earned income—14 percent of the first $6,810, to a maximum credit of $953 in 1990—and is unaffected by the presence of additional children beyond the first one. The income thresholds for phasing out these refundable credits are fixed amounts in both countries, independent of the family size or type. This fact seems to constitute a minor violation of horizontal equity at income levels where the phaseouts apply.

3.4.2 Tax-Free Income Thresholds

A major distributive aspect of both the Canadian and U.S. personal tax reforms was the increase in tax-free income thresholds and the reduction in the number of low-income taxpayers. The Canada Department of Finance projected that its reform package would increase by 850,000 the number of lower-income tax filers who pay no federal income tax. The U.S. tax reforms

24. Before World War II, personal exemptions in the U.S. departed from a per-capita pattern. Exemptions for children were much less than those for a filer or spouse, and in many years total exemptions for married joint filers were more than twice those of single filers. See Danziger and Kesselman (1978).

25. Single parents will be able to claim an adult credit for one dependent child. In addition, single adults, including single parents, will be able to claim an additional credit equal to 2 percent of net income between $6,169 and $11,169, for a maximum added credit of $100. This latter feature has elements of an earnings subsidy or EITC.

were estimated to relieve 6 million persons who paid federal taxes in 1986 from paying tax in 1988 (1987 was a transitional tax year for reforms). These numbers are quite significant, as they also imply reduced tax liabilities for many taxpayers with incomes somewhat above the new, increased tax-free thresholds. The numbers of persons required to file tax returns were also reduced by the reforms. Still, the availability of refundable tax credits in both countries makes it worthwhile for many low-income persons to file returns even if they are not otherwise required to file. Filing requirements are discussed further in the section on timing and accounting issues.

We can calculate tax-free income thresholds and compare them to the poverty thresholds for selected types of households.[26] For Canada, three types of tax thresholds are constructed: a "tax" threshold which considers only the nonrefundable personal credits; a "tax-credit" threshold which also considers the two refundable credits; and a "tax-credit-FA" threshold which further considers Family Allowance payments. The tax threshold is the highest level of income at which the household pays no federal income tax, ignoring the receipt of refundable credits and demogrants. The tax-credit-FA threshold is the income level (including FA receipts) at which a household's federal income tax, net of refundable credits and including tax on FA, is just offset by gross FA.[27] These figures include only federal personal income taxes. However all provinces except Quebec impose their income taxes as a percentage of the federal tax, so that their tax thresholds are the same, though they are higher in those provinces that provide special tax reductions to relieve low-income taxpayers.[28]

Table 3.2 presents the results of these calculations for Canada in the 1990 tax year for ten groups: aged singles and married couples; nonaged single persons with zero to two children; and nonaged married couples with zero to four children. The tax thresholds, which encompass only the nonrefundable personal credits, exceed the poverty threshold for just one group (married aged couples) and are less than half of the poverty thresholds for several groups (nonaged singles and married couples with two or more children). The tax-credit thresholds, which also include the refundable credits, increase the taxable income level only modestly for units without children, but sharply for those with one or more children. Still, the tax-credit threshold exceeds the poverty threshold only for married aged couples, and even on this basis the single nonaged are taxable at incomes far below their poverty threshold. The tax-credit-FA thresholds affect only units with one or more children; they

26. For both countries, the poverty thresholds do not distinguish between adults and children; the same threshold applies to a two-adult unit and a single-parent unit with one child.

27. The threshold does not consider OAS demogrants for aged taxpayers, since these are an integral part of the Canadian retirement income system. OAS payments are reflected in lower CPP/QPP benefits than the counterpart American OASDI retirement benefits.

28. Because of its own system of credits and rates, Quebec taxes single persons at incomes somewhat below the federal tax threshold. And most provinces impose their taxes at incomes well below the tax-credit and tax-credit-FA thresholds.

Table 3.2 Thresholds in Canada, 1990

	Thresholds			
Household Type	Poverty[a]	Tax[b]	Tax-Credit[c]	Tax-Credit-FA[d]
Aged Head				
Single	$12,459	$9,496	$10,280	
Married	16,891	17,964	19,198	
Nonaged Head				
Single	12,459	6,169	6,953	
Single, 1 Child	16,891	11,310	15,708	$17,949
Single, 2 Children	21,469	11,709	19,344	22,845
Married	16,891	11,310	12,879	
Married, 1 Child	21,469	11,709	16,891	18,885
Married, 2 Children	24,718	12,108	20,268	23,770
Married, 3 Children	27,007	12,906	23,715	28,208
Married, 4 Children	29,314	13,704	26,726	31,409

Sources: Poverty thresholds from Statistics Canada, Household Surveys Division, *Income Distributions by Size in Canada, 1988,* 13-207 (Ottawa: 1989). Tax thresholds computed from taxation provisions and rate schedules for the 1990 tax year.

[a]Poverty thresholds are the Statistics Canada low-income cutoffs for households in urban areas of 100,000–499,999 population; 1988 figures are projected to 1990 based on actual inflation for 1988–89 and a forecast 5 percent rate for 1989–90.

[b]Tax threshold considers only the effects of nonrefundable credits for filer, dependent spouse, children, and age. This and the other thresholds assume one earner per family unit, and all are based on federal taxes (including 5 percent surtax) alone.

[c]Tax-credit threshold considers the effects of tax threshold *plus* the refundable credits for children and sales tax as an offset to income taxes.

[d]Tax-credit-FA threshold considers the effects of tax-credit threshold *plus* the net-of-tax Family Allowance benefits (without provincial variations) as an offset to income taxes.

bring most such units above their respective poverty thresholds (except for married couples with one or two children).[29]

Table 3.3 presents the poverty and tax thresholds calculated for the United States in 1990 for the same ten groups. The country has no demogrant programs, but tax-credit thresholds have been calculated to reflect the earned-income tax credit as an offset to federal income taxes. Note that many states impose taxes at incomes below the federal tax thresholds, although some do have special relieving provisions for low-income taxpayers. The tabulated results show tax thresholds that roughly equal or exceed the poverty thresholds for almost all groups. The only exceptions are single persons, both aged and nonaged, though the gap is quite small for the former. Tax-credit thresholds raise the minimum taxable-income levels only for units with children, and they have their largest effect for smaller families. The tax-credit threshold exceeds the tax threshold by nearly $3,500 for a married couple with one

29. For areas with population above one-half million, the poverty thresholds are 14 percent above those tabulated. In those areas the only group having a threshold (tax-credit or tax-credit-FA) as high as its poverty threshold is married aged couples.

Table 3.3 Thresholds in the United States, 1990

Household Type	Thresholds: Poverty[a]	Tax[b]	Tax-Credit[c]	Canadian Levels[d]
Aged Head				
Single	$6,245	$6,100		$8,738
Married	7,878	10,850		16,318
Nonaged Head				
Single	6,774	5,300		5,910
Single, 1 Child	8,759	8,850	$13,416	15,257
Single, 2 Children	10,384	10,900	14,646	19,418
Married	8,759	9,550		10,947
Married, 1 Child	10,384	11,600	15,066	16,052
Married, 2 Children	13,308	13,650	16,296	20,205
Married, 3 Children	15,744	15,700	17,526	23,977
Married, 4 Children	17,774	17,750	18,756	26,698

Sources: Poverty thresholds from Bureau of the Census, Current Population Reports, Consumer Income, *Money Income and Poverty Status in the United States: 1988,* series P-60, no. 166 (October 1989); tax thresholds computed from taxation provisions and rate schedules for the 1990 tax year; last column based on table 3.2.

[a]Poverty thresholds are the average weighted thresholds, with amounts distinguished by age only for households of one and two persons; 1988 figures are projected to 1990 based on actual inflation for 1988–89 and a forecast 5 percent rate for 1989–90.

[b]Tax threshold considers the effects of personal exemptions and standard deductions, including extra deductions for aged filers. This and the other threshold are based on federal income taxes alone.

[c]Tax-credit threshold considers the effects of tax threshold *plus* the earned-income tax credit (available only to units with one or more children) as an offset to income taxes.

[d]These figures are the U.S.-dollar values (converted at 85 cents per Canadian dollar) of the larger of the Canadian tax-credit or tax-credit-FA threshold for each household type.

child, but by just about $1,000 for a married couple with four children. This difference reflects the structure of the EITC. These credits and their phaseout range are independent of the number of children in a family. In 1990, these credits were fully phased out at family incomes just under $20,300.

Both Canada and the United States partially succeed in relieving their poor populations from income tax, if one views the refundable credits and FA as offsets against income tax.[30] One major exception is single persons. Yet, other transfer programs in each country greatly relieve the situation of poor aged single persons, so it is mainly the nonaged single group that is taxable at poverty incomes. Married couples with one or two children also bear net tax at what are deemed poverty incomes in Canada, whereas in the United States these groups and their single-parent counterparts have tax-credit thresholds that substantially exceed the U.S. poverty thresholds. But if a consistent no-

30. Of course, this exercise ignores the indirect and payroll taxes borne by the poor; the former are sizable in Canada, the latter in the U.S. Indeed, the refundable sales tax credits and the EITC were originally intended as partial relief for these other taxes.

tion of poverty is applied to the two countries, Canada goes further than the United States in relieving the poor from taxation.[31] After accounting for the exchange-rate differential, Canadian poverty thresholds exceed those of the United States by 40–80 percent, depending on the household type. Cost-of-living differences between the two countries are not nearly that large. We can compare the two countries by converting into U.S. funds the larger of the Canadian tax-credit and tax-credit-FA thresholds; these are displayed in the last column of table 3.3. Clearly, Canada exempts from tax many people who would not be deemed poor in the United States.

Without indexation or discretionary periodic adjustments, the tax-free thresholds will decline in real value over time and cover a larger proportion of those at low incomes. Beginning with the 1974 tax year, Canada undertook full indexation to the consumer price index; this indexation included both personal exemptions and the income break points for the tax rate schedule. The rate of indexation was reduced to CPI increases above a 3 percent annual floor beginning in 1986, and this limited indexation was continued with the substitution of personal credits for exemptions in 1988. Beginning with the 1985 tax year, the United States undertook full indexation of the tax brackets, standard deductions, and personal exemptions. Personal exemptions were raised by scheduled amounts for each of the tax years 1987 through 1989; their indexation resumed in 1990. Standard deductions and rate brackets were revised by scheduled amounts for 1987 and 1988, after which they have been indexed. The lack of indexation in the U.S. tax through the earlier 1980s made many low-income persons taxable, and the 1986 reforms served to undo that damage.

Indexation is also relevant for the continued effectiveness of income security provisions contained in the personal tax system. Since its inception in 1978, the Canadian refundable child tax credit level and its income threshold for phaseout were indexed. In 1983 its phaseout threshold was frozen, then reduced in 1986, and indexed again for subsequent years. In addition to being indexed, the child credit level has been increased by additional, discretionary amounts in some years. The refundable sales tax credit levels and thresholds for phaseout were not indexed but raised periodically; with their conversion to GST credits in 1991, both will be indexed for inflation above 3 percent per year, as have the parameters of the RCTC since 1988. The $50,000 income threshold for clawing back Family Allowance and OAS payments also will have this limited indexation for 1990 and later tax years. In the United States the EITC has been fully indexed for inflation since 1984, for both the maximum credit and the income range over which credits are phased out. However, the income thresholds above which up to half of OASDI benefits are taxable ($25,000 for single filers, $32,000 for married joint filers) have been un-

31. Canadian poverty thresholds are set at the incomes at which a particular household type spends a proportion of its total income on food, shelter, and clothing that is 20 percentage points higher than that for an average-income family of the same type.

changed since their institution in 1984. Like the limited indexation of the threshold for clawing back OAS and FA benefits in Canada, this is a way of gradually implementing greater taxability or income testing on income security benefits.

3.4.3 Tax Differentiation at Taxable Incomes

One can devise a set of personal exemptions and a set of nonrefundable credits that are fully equivalent in terms of their implied tax-free thresholds. Hence, the choice between exemptions and credits reflects mainly value judgments about the appropriate differentiation of tax burdens by family size at *taxable* levels of income. These involve considerations of equity among single adults, married couples, and nonmarried couples. They also concern judgments about whether children are to be treated as consumer goods or as persons with needs as valid as those of adults. These views may be affected by the income level of the family; children's welfare might be viewed as society's responsibility for lower incomes but the family's responsibility at higher incomes.[32] We do not pursue these issues here, but we examine the actual tax differentials by family size embodied in the Canadian and U.S. systems. The degree of rate progressivity affects the tax differentials of credit and exemption approaches. Under a pure flat tax the two would be fully equivalent even at taxable income levels, so the partial flattening of rate schedules in both countries has moderated the differences.

In Canada the conversion of the marital exemption to a nonrefundable credit means that a dependent spouse with no income relieves the supporting taxpayer of a constant amount of taxes. The 1990 federal tax savings are about $920, almost independent of income (the exact value varies slightly because of the way that a two-tier surtax is applied). If the second spouse has a taxable level of income, there are no tax savings to the first spouse; both file separate returns. In the United States there can be much greater tax savings from marriage to an individual with no income. These savings result from the combined effects of the larger standard deduction for married, as against single, filers, the extra personal exemption for the spouse, and the wider tax brackets for married joint filers. In 1990, the resulting federal tax savings from having a spouse with no income were $670 at family adjusted gross income (before claiming deductions and exemptions) of $25,000; $2,880 at $50,000 income; and $4,660 at $100,000 income. At still higher incomes the benefits of the spouse's exemption are phased out, but large total tax savings remain. The U.S. rate schedules are constructed so that a tax penalty arises with marriage for persons with similar incomes.

Tax differentiation by number of children is more complex on account of the variety of provisions. In Canada the nonrefundable credits for dependent children offer the same value in taxes saved independent of the taxpayer's

32. See Brannon and Morss (1973), Pogue (1974), and McIntyre and Oldman (1977).

income.[33] These credits are twice as large for the third and each subsequent child in a family as they are for each of the first two children. But other tax and transfer provisions make the net dollar value of an additional child vary widely by family income. The refundable child tax credits and the child component of refundable sales tax credits are together much larger than the value of the nonrefundable child credits. They are payable to families with no taxable income, as well as to those with incomes up to the thresholds for phase-out. These credits are fully phased out at incomes below $60,000, even for three children. Family Allowance is paid to all families as fixed amounts per child, although some provinces vary payments with the number or ages of children in the family. Payments are taxable and also subject to clawback as either parent's income rises above a $50,000 threshold. At higher family incomes, the only remaining tax differential for a child is the nonrefundable tax credit, which is worth less than $70 in federal tax savings for each of the first two children. The overall pattern of differentials for a child by family income is generally to decline with income. But there are ranges of income over which it rises (income just becomes taxable where the nonrefundable credit assumes value) and has inequities (the clawback is based on the higher-income parent rather than on the parents' combined income).

The tax differentials for children in the U.S. system are simpler due to the number and nature of related provisions. Each extra child gives rise to an additional personal exemption, $2,050 per capita in 1990. The value in terms of federal tax savings from an extra child is proportional to the rate bracket of the taxpayer. In the 15 and 28 percent brackets, the savings per child are $308 and $574, respectively. Moreover, in the income ranges for clawback of the benefits of the 15 percent bracket, each exemption assumes a value of $677 at the effective marginal rate of 33 percent. It appears strange that the clawback of the bottom bracket should raise the tax differential for children at very high incomes. The personal exemptions themselves are clawed back at still higher incomes, so that the tax differential for children fully vanishes. Two other provisions in the U.S. tax can give a substantial tax value to the first child in a family, beyond the extra personal exemption. The presence of a child in a single-parent family qualifies the unit for both the higher standard deduction and the more favorable rate schedule of a head of household. And the presence of a child in a lower-income household usually qualifies the household for the EITC, though for separated or single parents conditions of child custody or household maintenance must be satisfied.

3.5 The Tax and Transfer Base

The base of a tax system measures ability to pay taxes, and the base of a transfer system measures the need for support. Both are measures of the eco-

33. This obtains so long as the taxpayer's income is at a taxable level, and the value will vary a bit based on the filer's surtax rate.

nomic resources of the individual or household; typically some variant of income is employed. One might expect a well-designed base to serve equally well for tax or transfer purposes, with individuals moving smoothly from being net taxpayers to net transfer recipients as their measured base declines. Such a uniform base would satisfy horizontal equity, as well as ease the coordinated operation of the tax and transfer systems. However, one often finds different base measures for the two purposes, that is, collecting tax revenues and disbursing income security benefits. The base for transfers is most often a broader one than that for taxes. This may reflect society's more jaundiced view of beneficiaries than of taxpayers, or perhaps the two groups' relative influence on the political process. This section assesses two main aspects of the base for income security issues: the inclusion in the tax base of transfer receipts, and the bases used for income tests, clawbacks, and phaseouts built into the tax system. It also considers the equity aspects of expanding the tax-transfer base to include an imputed return on assets such as housing.

3.5.1 Transfers in the Tax Base

Both countries exclude from their personal tax bases virtually all in-kind public transfer benefits and most income-tested transfers. Canada excludes benefits from Social Assistance, the GIS (and provincial supplements), and workers' compensation, and the United States excludes its benefits from welfare, SSI (and state supplements), and workers' compensation. Because the benefits of these programs (except for workers' compensation) are strongly income-tested, there is little overlap between recipients and taxable persons. But occasionally such a recipient will be taxable in a year when employment, disability, or age status changes so that the individual's income rises or falls sharply. There can be horizontal inequity in the tax-transfer treatment of such an individual compared to others whose employment status has been more stable over the entire year. Yet the tax exemption of such income-tested benefits does simplify the problems of "rate stacking" or coordination to avoid excessive total marginal tax rates.

Canada includes in the personal tax base the benefits of the demogrants (OAS and FA) and the other social insurance programs (UI and CPP/QPP). None of the tax credits themselves are taxable, as they are subject to phaseout provisions. But some provincial welfare schemes may count tax credits and demogrants as part of their recipients' resources. The amounts of demogrants (and UI) clawed back from a taxpayer are themselves tax deductible. This is necessary because FA and OAS are taxable, as well as subject to clawbacks, and would otherwise be taxed at more than 100 percent. The United States includes in the personal tax base certain social insurance benefits—all UI benefits since the 1986 reforms, and up to half of OASDI benefits above specified income thresholds.[34] It does not count the benefits of the EITC as taxable

34. See Feldstein (1974) and Munnell (1986) for analysis of the effects of the earlier exclusions and the arguments for including in tax UI and OASDI benefits, respectively.

income, since they are subject to phaseout based on income. But EITC benefits are counted as resources in the income test for AFDC beneficiaries. And the food stamp program includes in income such items as welfare cash benefits, workers' compensation, UI benefits, and farm and training subsidies.

3.5.2 Base for Tax Clawbacks and Phaseouts

Stand-alone income transfer programs usually contain much broader measures of resources, including asset tests, than personal taxes. Sometimes they will start with the tax measure of income and add in other items that are either excluded from or deductible from taxable income. For example, the GIS includes tax-deductible retirement savings, the exempt portion of capital gains, and workers' compensation benefits. The U.S. food stamp program considers AFDC, SSI, and workers' compensation benefits in its computation of benefits. This tilt frequently carries over to personal tax provisions oriented toward income security objectives. In Canada the refundable tax credits are conditioned on the taxpayer's net income *plus* social transfer benefits that are otherwise nontaxable (Social Assistance, GIS, and workers' compensation). In the United States, receipt of otherwise tax-exempt municipal and state bond interest affects the threshold for partial taxation of OASDI benefits; in effect, the interest becomes partially taxable. And disability payments and the value of meals and lodging excluded from gross income qualify as earned income for computing EITC benefits.

3.5.3 Arguments for a Broader Base

Most stand-alone income security programs that are not structured as social insurance contain asset tests. Several income security provisions in the personal tax are conditioned upon a broader base than that used for taxation.[35] Both of these approaches are an attempt to target the limited total available funds more effectively to persons most in need. Yet asset tests are typically a very crude tool, with meager thresholds, above which benefits are completely denied. These tests discourage lower-income people from accumulating much in the way of financial assets, particularly those who expect to need support from time to time. Moreover, the asset tests of most welfare programs in both countries disregard equity in owner-occupied housing (sometimes up to specified limits). This feature biases the composition of savings toward home ownership, exacerbating the distortions of the income tax found in both countries. Other assets such as tax-sheltered savings in RRSPs and IRAs also do not enter into the measure of need, except in years when funds are withdrawn and become taxable.

The cited deficiencies could be remedied by expanding the transfer base to include an imputed return on assets that do not yield current income, such as

35. See studies in Federal Council on the Aging (1977) for analysis of existing U.S. provisions and proposals for broader inclusion of assets in income tests and tax-transfer programs.

home equity and tax-sheltered savings. In effect, this would broaden the base from current taxable income toward potential consumption. One might wish to use such a broadened base for transfers while retaining a somewhat narrower base for personal taxation. Tax-sheltered savings were instituted under the personal income tax precisely to allow tax deferral on the funds. A personal tax on consumption would include net dissavings as part of its base but would not in principle count accruing incomes in tax-sheltered saving accounts. The key reason for using a broader base measure under a transfer than under a tax program relates more to the accounting periods and nonlinear character of the tax-transfer system. An individual can bunch withdrawals from a tax-sheltered saving account so as to obtain large income security benefits in some years, interspersed with years when the individual lives off the withdrawals. The next section examines these timing and accounting issues in greater depth.

3.6 Timing and Accounting Issues

Any tax or transfer program has important timing issues, which are embodied in its accounting and administrative structure. These include the frequency of benefit payment and income measurement and the accounting periods for payments and income measurement. The design of these timing features has major implications for the responsiveness of benefits to the changing needs of households, the horizontally equitable treatment of beneficiaries, and the net budgetary costs of an income security provision. There are further effects on the administrative and compliance burdens of the system, as well as the possible need for recovery of overpayments. While these features may appear as mere technical details in the design of income security, they can vitally influence the efficacy of policies in meeting their prime objectives.

3.6.1 Frequency of Payment

The frequency of income security payments and of tax-based transfer payments affects the ease of household budgeting by beneficiaries. Some observers would argue that frequent payments are important in assisting responsible spending behavior by beneficiaries; others might argue that less frequent but larger payments facilitate the purchase of consumer durables by families who have difficulty in saving and little credit. Regardless of one's view on this matter, the income security objective requires that payments be sufficiently frequent to avoid problems of destitution by those beneficiaries who cannot budget well. Virtually all stand-alone income security programs offer frequent payments, either fortnightly or, at most, monthly. Similarly, some income security provisions of the personal tax system are delivered quite frequently. These include the basic tax-relieving and tax-differentiating provisions that apply to all taxpayers and are integrated into the tax source-withholding tables. Examples are the Canadian nonrefundable personal credits and U.S.

personal exemptions and standard deductions. These are delivered with the same frequency as the individual's pay period.

Other tax-based transfers that are income-tested, such as the refundable provisions, are typically delivered less frequently. The refundable child tax credits were originally paid out just once a year, following the filing of tax returns and based on the filer's previous-year income. In the 1986 tax year, prepayment of two-thirds of a family's RCTC was introduced, with payment in November based on the *previous* year's income.[36] Payment of the balance or recovery of excess advance payments is accomplished with the next tax filing. Upon the conversion of the federal sales tax credits to GST credits in 1991, the payment will be changed from annual to quarterly. If tax-based transfers can be integrated into the tax-withholding mechanism, they can achieve still greater payment frequency. The EITC allows eligible individuals to elect to receive advance payments through their employers.[37] Advance payments are computed by the employer based on the claimant's earnings in each pay period. They are used to offset amounts required to be withheld for the claimant's income tax and OASDHI payroll taxes.

The formal requirements for filing an income tax return differ between the two countries. Canada has no income threshold for requiring individuals to file. Rather, an individual must file only if tax is payable for the year beyond any amounts withheld at source.[38] In the United States, individuals must file a return if their gross income exceeds their tax threshold (as given in table 3.3), even if they have no taxes due.[39] In fact, most of the working poor file returns in both countries to obtain a refund of taxes withheld, or to claim the EITC in the United States. Most other low-income Canadian persons also file returns in order to claim refundable child and sales tax credits. The refundable credits offered by some U.S. states attract additional filers. As a consequence, a great majority of poor and low-income households actually file returns; the proportion is higher in Canada than in the United States despite Canada's less inclusive formal filing requirement.

3.6.2 Responsiveness

Making payments of income security benefits more frequent does not in itself make the programs more responsive to variations in the need of benefi-

36. Advance payments are made to recipients whose net family income for the previous year was less than two-thirds of the credit's phaseout threshold; beginning in the 1990 tax year, advance payments are also made for families with three or more children whose incomes are less than the credit's phaseout threshold.

37. The claimant must file a certificate (Form W-5) with his employer confirming that the claimant is eligible for the credit and has no other certificate in effect with another employer, and indicating whether the claimant's spouse also has a certificate in effect. The tables used to compute advance payments reflect whether the worker has a spouse with a certificate.

38. Individuals also must file if they have received a demand from Revenue Canada, Taxation, to file; if they have received an advance payment of child tax credit for the year; or if they disposed of a capital property in the year.

39. A person who receives advance EITC payments from an employer must file an income tax return, regardless of income level.

ciaries. If a household suddenly drops from an average income to little or no income, policies should provide support with reasonable timeliness, so as to avoid hardship. For example, making the Canadian refundable tax credits payable more often and in advance does nothing to improve their responsiveness. Payments are still based upon the annual filing of tax returns, so that a household with a sudden loss of income might wait up to fifteen months before obtaining any relief. The exact delay will hinge upon the timing and severity of the income drop and upon the unit's income before and after declining, relative to the phaseout threshold of the credit. Other tax-related income security benefits are also linked to the annual filing of returns and therefore suffer similar deficiencies of responsiveness.

Most stand-alone income security programs are more responsive to the changing needs of beneficiaries, because they require income reporting more frequently than once a year. This is true of welfare systems and unemployment insurance.[40] Demogrant programs are highly responsive in their delivery of net benefits; they make universal gross payments and then rely on the withholding system to collect any taxes. Tax-based components of income security can also be somewhat responsive, based on their linkage with the withholding of taxes. Clearly, the personal credits in Canada and the personal exemptions in the United States have their benefits delivered with each pay period for employed persons. However, the current assessment method used in both countries does not allow a worker to catch up for benefits lost when his earnings in a pay period fall below the respective tax threshold; the worker must wait until the next annual tax filing to obtain a refund.[41] Advance payments of EITC are made through employers, based on special credit tables and the worker's earnings in each pay period.

One cost of making income security benefits highly responsive is the need for frequent income reporting. With some added complexities this can be accomplished through tax-withholding devices. Most stand-alone income security programs achieve it by requiring explicit periodic reports of income or employment. It is interesting that the policy most closely approaching a guaranteed income in Canada, the GIS, does not require frequent reporting by beneficiaries. Since the program is confined to the aged, there is much less income variation to be monitored than there would be for a program encompassing the working poor. The GIS requires only one application per year, with monthly benefits based on the claimant's income for the previous calendar year. A person who has just retired or who anticipates a substantial decline in income from specified sources can have benefits computed on estimated income for the current year. However, an *unanticipated* income decline that occurs within a year will not be reflected in higher benefits until the following

40. The food stamp program certifies welfare households for the duration of their welfare grants. Nonwelfare households are certified for three-month periods, but shorter periods can be used, hinging upon anticipated instability of household income or composition.

41. The cumulative assessment method used in Britain ("Pay As You Earn") overcomes this deficiency, but at a considerable administrative cost to employers and the tax department.

year. The counterpart U.S. program, SSI, which covers the disabled as well as the elderly, has monthly reporting, so benefits can respond far more quickly to changes in income.

3.6.3 Timing and Horizontal Equity

Without extensive averaging provisions, departures from linearity in the tax or tax-transfer rate schedule can make a person's net taxes or benefits hinge on the timing of his income receipts. Two individuals with the same long-run average income level could face different taxes or benefits based on the timing of their incomes—a clear violation of horizontal equity. These effects can arise from the benefit schedule in income security programs, the tax rate schedule, tax-transfer provisions, or the interaction between the tax and transfer programs. Both Canada and the United States abolished their provisions for general income averaging with their personal tax reforms of the latter 1980s. The removal of averaging was justified as a simplification measure, and it was further argued that averaging was much less needed on account of the flattening of the tax rate schedules. Yet this view ignores the remaining progressivity of the rate schedules, as well as the nonlinearities introduced by threshold and clawback provisions related to income security and its taxation.

Several examples can be cited to illustrate the horizontal inequities that result from the threshold and clawback provisions; others appear in the next section on effective marginal tax rates. Clawback of FA and OAS payments occurs only above $50,000 of net income in a year. For two persons having average annual net incomes of $50,000, the one with greater year-to-year income variability will have more of his benefits clawed back. Indeed, a person with perfect stability at $50,000 in every year will not face the clawback at all. Similarly, the half-taxability of OASDI benefits arises only above specified annual income thresholds. Hence, income variability around the threshold will raise the filer's taxability of benefits for a given average level of income. The EITC benefit schedule is also nonlinear in earned income; annual benefits first rise with earnings, are flat over a range of earnings, and finally decline with higher earnings. Year-to-year earnings variability either around the level where the maximum EITC benefit is first attained or where the benefit phase-out begins will reduce a worker's total benefits relative to someone with more stable earnings. However, earnings variability around the point where the EITC fully phases out ($20,264 in 1990) will increase the worker's total benefits.[42]

These horizontal inequities result from annual accounting periods for tax-transfer provisions that parallel the period for personal tax accounting. Yet even within the calendar-year period, income variation can lead to the periodic

42. The reason that income variability is actually beneficial in this case can be explained in economist's jargon as follows. At the point at which the EITC fully phases out, the tax-transfer schedule becomes convex; all of the other examples of income variability hurting the individual concern ranges at which the tax-transfer schedule is concave.

receipt of benefits that are deemed unwarranted on an annual basis. That is, a person is measured as needy in particular periods of the year, but his entire-year earnings would make him ineligible for benefits. This situation can arise under tax-transfer programs and requires the recovery of excess benefits from the individual. Most stand-alone income security programs avoid this problem by utilizing shorter accounting periods, often coinciding with the benefit payment period. Certain tax-transfer programs, such as the Canadian refundable tax credits, largely avoid this problem by basing their payments on past income. Still, the introduction of advance payments of the refundable child tax credits can produce overpayments. Advance payments of EITC benefits through employers can also yield overpayments that need to be recovered with the annual filing of tax returns. So long as excess payments need to be recovered from households at average or higher incomes, no great difficulties arise. Moreover, the intrayear income variability that creates the excess payments tends to generate overwithholding of income taxes, against which the benefit recovery can be charged.

Nonlinearities of the effective tax-transfer rate schedule also invite individuals to manipulate the timing of their income receipts. Certain types of income can be accelerated, delayed, or bunched so as to maximize the net benefits. The income types that are most open to discretion in timing are the realization of capital gains and the withdrawal of taxable funds from RRSPs and IRAs. Let us illustrate the potential gains to a Canadian retired couple from bunching their RRSP withdrawals, assuming they have funds that would yield $13,000 annually for their life expectancies. We consider the GIS along with provincial supplements in British Columbia, the OAS, and income taxes. The couple's first option is to receive $13,000 annually through withdrawals or annuity payments. This income would disqualify them from the GIS and the provincial supplement, but they would draw OAS benefits of $8,235 per year at mid-1990 rates. The couple's second option is to bunch RRSP withdrawals of $26,000 in alternate years. Because their non-OAS income would be zero every other year, they would receive the full GIS and provincial supplements totalling $7,820 in alternate years. After subtracting out the personal taxes payable in alternate years, their average net transfers would be over 24 percent higher than under the uniform withdrawal strategy.

3.7 Effective Marginal Tax Rates

The total effective marginal tax rate facing an individual includes the explicit marginal rate of personal tax, the clawback or phaseout rates on any relevant tax transfers, and the benefit reduction rates on cash or in-kind benefits that the individual receives.[43] These rates will cumulate additively unless

43. Kesselman (1980) assesses these issues for earlier Canadian provisions. Fortin (1985) provides an analysis of effective marginal tax rates in Canadian income security provisions and their distortions and welfare costs.

the benefits of one provision are deductible in the calculation of need, or ability to pay, of the other provision. Most recipients of cash or in-kind benefits from stand-alone income security programs are below the thresholds for personal tax and do not face both marginal rates simultaneously. However, the phaseouts and clawbacks of income security delivered through the tax system confront large numbers of taxpayers who also bear positive rates of tax. Sometimes the marginal rate implications of these provisions are relatively concealed from taxpayers, so that the true effective marginal rates are not always obvious. We illustrate several of these marginal rate effects due to income security provisions in the personal tax system, and then we consider their implications for policy.

The importance of marginal tax rates is well known in the theoretical and policy assessment of taxation; they are equally important for income security issues. Changes in rates may evoke a wide range of behavioral responses by taxpayers and beneficiaries. These include individuals' labor-supply decisions with respect to hours of work, exertion, labor-force participation, regularity of work, industry, occupation, education, training, mobility, responsibility, and joint family decisions. On the labor-demand side, the key choices by business firms include total employment, hours per week versus number of workers, occupational and skill composition, stability of employment, and compensation including fringe benefits. Saving incentives may also be affected with respect to aggregate levels, composition, asset and industry allocation, owner-occupied housing, and entrepreneurial behavior. Other relevant incentives include income reporting, avoidance, and evasion; the timing and bunching of income; and family formation and instability. Many of these effects are the result of "imperfect" definitions of the tax or transfer unit, the tax or transfer base, and timing and accounting principles; but increases in effective marginal rates aggravate the behavioral responses.

3.7.1 Illustrative Marginal Tax Rates

Reducing marginal tax rates was a primary goal of personal tax reform on both sides of the border. Yet both countries previously had, and have retained or expanded, income security provisions in their tax systems that raise effective marginal rates well above the statutory rates. The phaseout provisions in Canada's refundable child and sales tax credits raise effective marginal rates by 5 percentage points for taxpayers with incomes in the phaseout ranges. The 1990 thresholds for the two types of credits are $24,750 and $18,000, respectively. The conversion of the sales tax credit to a Goods and Services Tax credit in 1991 lifts the threshold for phaseout to $24,000. This substantially increases the number of families who face both phaseouts simultaneously and yields a 10-percentage-point increase in their effective tax rates. Added to the middle tax rate bracket for many taxpayers, the increase will create total federal-provincial effective marginal tax rates exceeding 50 percent—at very moderate incomes.

The recently introduced clawbacks on benefits from Family Allowance and OAS add 15 percentage points to marginal tax rates for a range of incomes above the $50,000 threshold. However, since the clawed-back amounts are tax-deductible, the net increase in effective marginal rates ranges from about 7 to 9 percentage points (depending upon the taxpayer's province and income bracket). These increases are added to the rates of the middle and top marginal tax brackets, yielding in some cases total federal-provincial effective marginal rates approaching 60 percent. The clawback on UI benefits, with a 1990 threshold just below $50,000, is applied at 30 percent, so the impact on effective marginal rates is twice that of the other clawbacks.

The conversion of personal exemptions into nonrefundable credits as part of the Canadian tax reforms did have the incidental effect of reducing effective marginal tax rates for a range of income of dependent spouses. In claiming the marital exemption, an initial amount (about $500) of income of the dependent spouse could be ignored, and additional income reduced the net exemption dollar-for-dollar. Hence, a dependent spouse faced an initial 0 percent marginal tax rate, followed by an effective marginal rate equal to that of the spouse (often the relatively high rate of a full-time worker), and finally the bottom bracket rate at income above the basic personal exemption; at this point the spouse filed separately. With personal credits in place of exemptions, a similar arrangement has been retained, namely a small disregard followed by dollar-for-dollar offset of the exemption-equivalent amount of the credit. Since the credits are exemptions evaluated at the bottom bracket tax rate, a dependent spouse with modest income now faces the bottom rate rather than the primary-earner spouse's marginal tax rate.

When the United States reformed its personal tax, it chose to claw back from higher-income taxpayers the benefits of the 15 percent rate bracket and of the personal exemptions. This is done by a 5 percent surcharge for incomes above specified levels, depending upon the type of filer, creating an effective 33 percent marginal rate bracket within the 28 percent nominal rate bracket. Benefits of the bottom bracket are clawed back first and are entirely eliminated at 1990 incomes of $97,620 for single filers and $162,770 for joint married filers. Above those incomes the personal exemptions are clawed back at a rate of 5 percent. The income range for clawing back the benefits of each $2,050 personal exemption in 1990 is $11,480 (the benefit for the 28 percent rate bracket is $0.28 \times \$2,050 = \$574$). Thus the clawback of personal exemptions arises only at very high income levels.

Two other income security features of the U.S. personal tax also raise effective marginal rates. Benefits of the EITC are phased out at a rate of 10 percent for 1990 incomes between $10,730 and $20,264. Many American families in this income range are taxable, and if they qualify for EITC their effective marginal tax rate is 25 percent rather than the nominal marginal rate of 15 percent. Up to half of OASDI or Social Security cash benefits must be included in the taxable incomes of single filers with incomes above $25,000 and married joint filers with incomes above $32,000. This provision operates in such a way as to raise effective marginal tax rates of affected persons by 50 percent of their statutory rates. Most affected persons are in the 28 percent federal tax bracket, so that their effective marginal tax rates jump to 42 percent. Clearly, the addition of income taxes in some states could carry their total effective marginal tax rates above 50 percent.

3.7.2 Policy Issues and Analysis

The notches and poverty traps created by high effective marginal rates, which approach and sometimes exceed 100 percent, are familiar for stand-alone income security programs (see Hausman 1975; Fortin 1985). These result from prohibitions on full-time work for UI beneficiaries, earnings tests for OASDI, and income tests of up to 100 percent for beneficiaries of welfare, GIS (with provincial supplements), and SSI. Income tests on in-kind benefits add directly to the effective marginal tax rates when the programs are not coordinated. The marginal rate effects of income security provisions in the tax system are less severe but also much less recognized. Since these can affect large numbers of people, and those affected have far more earnings than the poor, the potential distortions of economic behavior may be even more important. The use and structuring of such tax provisions raise fundamental issues of policy relating to economic efficiency, vertical equity, and tax administration and compliance.

Clawbacks and phaseouts of income security or tax-based benefits are commonly motivated by the perception that it is "wasteful" for benefits to go to the nonpoor or the well-off. This view cites the poor targeting of public funds, or tax expenditures, for income security objectives. Yet it ignores the economic costs of the clawbacks and phaseouts themselves. These are the economic inefficiencies and behavioral distortions caused by the provisions' increased effective marginal tax rates, along with their administrative and compliance costs. One policy alternative is to have less of such income-testing in the tax system and to raise more gross revenues to finance the more costly but more widely dispersed benefits. That is, one can either raise the marginal effective rates on beneficiaries alone (perhaps within particular income ranges), or one can raise marginal tax rates to a smaller degree for all or most taxpayers. This is a complex choice based upon various trade-offs between efficiency and equity, as well as the administrative and operational aspects.

Optimal tax theory provides general guidance in the decision whether to use clawbacks and phaseouts and, if they are adopted, in the choice of how to structure them.[44] The efficiency cost of raising the effective marginal tax rate in a particular range of income hinges upon the initial marginal tax rate in that income range, how many individuals fall in that range, their total income or

44. For general theory, see Mirrlees (1971) and Atkinson (1982); applications of the theory to a two-bracket rate schedule relevant to design of the tax-transfer system are in Kesselman and Garfinkel (1978) and Sheshinski (1989).

earnings within the range, and the responsiveness of their work effort or tax avoidance activities to higher marginal rates. The efficiency costs rise more than proportionately with increases in the marginal rate, so that one would usually not want to impose clawbacks or phaseouts on top of high rates of income testing in other income security programs. Nevertheless, in some circumstances it may be economically efficient to have very high effective marginal rates, even rates above 100 percent with so-called notches, as a way of concentrating the inefficiencies at lower incomes (see Blinder and Rosen 1985). Since aggregate earnings at those levels are relatively small, this approach can sometimes serve to minimize the total efficiency costs. This analysis may help to explain the existence of poverty traps in the policies of many countries.

More typically, it is efficient to avoid extremely high marginal rates. Income thresholds in tax-based phaseouts are a way to avoid compounding the already high effective marginal rates faced by beneficiaries of stand-alone income security programs. For similar reasons of efficiency cost, one would usually not want to impose high rates of clawback or phaseout on top of high personal marginal tax rates. This suggests that the income thresholds used for such devices be set sufficiently low that the targeted benefits are fully phased out at income levels below those attracting high personal marginal tax rates. Of course, the efficiency goal has to be balanced against the desired distribution of net benefits. A broader view of the policy problem is that the high marginal rates and notches in the separate income security programs need to be assessed and perhaps modified. For reasons of efficiency as well as administration, it may be desirable to undertake such reforms in a way that more closely integrates income security programs and personal taxation.

The flattening of rate schedules with recent tax reforms in both countries suggests that it is now less costly in efficiency terms to apply phaseouts across wide income ranges, including higher incomes. Still, the efficiency costs of providing most income security for employable persons through such income-tested or clawed-back provisions may be excessive. Theoretical and quantitative analyses have found strong efficiency advantages to using alternative policy tools. First, personal "tags" such as disability, old age, and perhaps presence of preschool children can be used to categorize potential beneficiaries as nonemployable (see Akerlof 1978). Higher income-tested benefit rates can be restricted to those who cannot work and those deemed as not expected to work. By reducing the total budgetary costs of universal support programs, this approach can relieve the pressures for higher marginal rates on taxpayers. Second, persons deemed employable can be assisted through a variety of work-related programs, including wage and employment subsidies or similar provisions delivered through the tax system.[45] These programs carry far less

45. For elaborations of this categorical approach and of the possible role of government as employer-of-last-resort, see Kesselman (1973, 1985), Mendelson (1986), and Ellwood (1988).

efficiency cost than general income support programs for employable persons, since they sharply reduce the effective marginal tax rates on beneficiaries' work (Kesselman 1976; Ballard 1988).

3.7.3 Application in Canada and the United States

In Canada, the policy debate has centered on the universal demogrants and public health insurance.[46] Universality has been attacked as wasteful, costly, and "inefficient" in its targeting. First the demogrants were made taxable, and more recently they have been subjected to clawbacks up to 100 percent. Several provinces allowed "extra-billing" for physician services and deterrent charges for hospital admissions, but the federal government has thwarted these practices through its control over cost-sharing. Similar moves can be seen in the United States. The legislated but never-implemented Medicare tax (a federal surtax on the income of seniors) is one example. Many other proposals for greater taxability or clawbacks of income security benefits can be found in the Congressional Budget Office's annual report, *Reducing the Deficit: Spending and Revenue Options*. Examples from the 1989 report include: taxing a portion of Medicare benefits; reducing the subsidy for nonpoor children in child nutrition programs; counting energy assistance as income under AFDC, SSI, and food stamps; phasing out the child care credit at higher incomes; taxing the income-replacement part of workers' compensation; and increasing the taxation of OASDI benefits.

All of these policy initiatives and proposals are motivated by the goal of reducing expenditures, recovering part of payments, or improving the targeting of benefits. An underlying objective is to reduce the budgetary deficit or to avoid the need to raise tax rates. Yet all these forms of benefit clawback or income testing act very much like an increased tax on the affected persons. Hence, they invoke the efficiency and equity issues that have already been discussed. Moreover, the notion that benefits of these spending and tax expenditure provisions are not sufficiently targeted on the neediest ignores the fact that they are financed out of general revenues. Even if the tax system were strictly proportional, the payment of universal demogrants or the provision of universal health insurance would be significantly redistributive. And the efficiency costs of such programs may also be minimal, aside from the distortions of the taxes needed to finance them. For example, the OAS demogrants paid to all elderly Canadians may simply substitute for savings accumulated for retirement purposes.[47] Even using coinsurance or deterrent fees for publicly insured health services may provide little effective rationing of demand, and the economic efficiency of these devices is open to question.

46. For analysis of the demogrant issues, see Kesselman (1980) and Mendelson (1981).

47. Nevertheless, there may be efficiency gains to recapturing OAS benefits from higher-income recipients on account of the distortions of the taxes needed to finance them. That is, it may be efficient to raise the effective tax rates on the elderly through the OAS clawback so as to reduce the tax rates needed for the general taxpaying population, because the labor-supply responses of the elderly are less than those of the working population.

3.8 Program Complexity and Simplification

It might be deemed acceptable to have very complex taxation provisions affecting primarily businesses and high-income households. Those groups either possess the requisite knowledge or can afford to hire professional advice. Comparable complexity is hardly tolerable for the tax and transfer provisions affecting millions of people at lower incomes, who typically are far less sophisticated in their facility with tax laws, bureaucratic procedures, and paperwork. If the overall tax-transfer system in Canada or the United States is challenging for educated analysts to comprehend, as our study suggests, it must be hopelessly complex for the actual and potential beneficiaries. There may be some legitimate policy objectives justifying limited complications. Examples might include social insurance principles, specific in-kind benefits, work-related benefits, or attempts to refine horizontal equity for persons with differing circumstances. Yet it would be hard to justify many elements of the existing systems or the systems in their entirety.

Undue complexity in transfer programs and tax provisions for income security can undermine their effectiveness. Among the possible results are incomplete take-up by eligible persons, horizontal inequities, errors in computing benefits or taxes due, and uncertainty by beneficiaries about the consequences of various actions on their benefits. The last effect may raise or reduce the disincentives for work and savings behavior relative to a clearer system, but it can hardly be viewed as desirable. Incomplete take-up can be found for both in-kind and tax-transfer programs. About one-fourth of AFDC households do not apply for food stamps, "for unknown reasons," even though virtually all such families are eligible. Significant numbers of elderly Canadians who are eligible for at least partial GIS payments fail to apply for them. Take-up is also less than complete for refundable credits, which require annual filing of tax returns by nontaxable claimants. In contrast, take-up rates are virtually 100 percent for the Canadian demogrant programs, which require just a single registration.

3.8.1 Program Examples

Much complexity arises from the structural features of individual tax or transfer provisions, interactions between provisions, or duplication of function by multiple provisions. The Canadian tax and transfer treatment of dependent children provides a striking example of unwarranted program complexity. The system contains nonrefundable credits, two distinct refundable credits, and demogrants that are both taxable and subject to clawback. The resulting pattern of net benefits per child as a function of family income is hard to justify. Yet the pattern is less haphazard than it was prior to the replacement of child exemptions with nonrefundable credits. At that time the net benefits rose with income because the exemptions were of no value to nontaxable units; they reached a peak at family incomes near the threshold for phaseout of the refundable child credits, which between 1982 and 1985 was \$26,330. Hence, the fiscal benefits for a child were larger for nonpoor taxpayers than for poor, nontaxable households. Yet the shift to nonrefundable credits has only partially remedied the pattern, and it has left the multiplicity of provisions.

The Canadian provisions for children could be simplified in ways that would simultaneously rationalize and coordinate them. In 1990 the Family Allowance payment is \$400 per child; the exemption-equivalent value of the nonrefundable child credit is \$399 for each of the first two children in a family. The FA could be made nontaxable and the nonrefundable credits simultaneously abolished. A revision of the threshold for clawback of FA could offset the lost taxability of FA at middle incomes. In 1991, the threshold for phaseout of refundable credits for the federal sales tax was raised to \$24,800 (from its 1990 level of \$18,000), almost identical to the phaseout threshold for refundable child tax credits. There is now no reason for keeping the two refundable credits distinct. The two could be consolidated into a single credit, with the credit amount per child equal to the sum of the child amounts under the two existing credits. A more sweeping reform could be instituted that would roll *all* of the child-related provisions into a single child benefit. Perhaps the best approach would be universal child demogrants subject to partial clawback based on family income and beginning at a modest threshold, such as the poverty threshold for the relevant family size. As far as feasible, it would be desirable to integrate this clawback into source withholding of taxes.

The United States has fewer overlaps between tax and transfer systems precisely because it has been less venturesome than Canada on tax-based transfers to the working poor. But food stamps, housing subsidies, and other in-kind and cash transfers do provide many interactions and complexities. Some of these programs count receipts or entitlements from other programs in their computation of benefits. This policy can reduce the problem of high effective marginal rates due to the stacking of benefit-reduction rates from individual programs, but it also complicates program administration and enforcement. Moreover, entitlement to benefits under some programs, such as Medicaid, may hinge upon eligibility for welfare. The only real tax-based transfer in the United States, the earned-income tax credit, has a relatively simple benefit structure because it uses standard tax definitions of earned income and adjusted gross income in computing benefits. Personal exemptions for dependent children are phased out at very high incomes through a 5 percent surtax, which tax expert Joseph Pechman characterized as "bizarre" and "an anachronism that should not be allowed to survive" (1987, p. 22).

In addition to the structural complexity illustrated in the preceding examples, many low-income taxpayers and transfer recipients face serious barriers in simply interpreting their eligibility for particular benefits. Such compliance complexity afflicts a wide range of income security programs, particularly those in which there is scope for administrative discretion. These problems are also found in such commonly used American tax provisions as the dependency exemptions, marital and filing status, the earned-income tax credit, the child care credit, the kiddie tax, and child support payments. For example, an individual's eligibility to claim a tax exemption for a dependent person hinges upon the dependent's relation to the taxpayer, levels of support to the dependent from the taxpayer and from others, and the dependent's income, place of abode, and citizenship or country of residence. For most of these provisions, the qualifying rules could be radically simplified with only minor cost in terms of reduced horizontal equity, potential for abuse, or revenue loss (see suggestions by Schenk 1989). Several Canadian tax provisions affecting low-income taxpayers have similar, often needless complexity in their qualifying conditions. Examples include nonrefundable credits for dependents, deductions for child care expenses, and the tax treatment of alimony and maintenance payments.

3.8.2 Guidelines for Simplification

It is difficult to formulate general principles to guide the simplification of income security, precisely because of the multifaceted objectives of these provisions. In part, complexity is the result of the heterogeneity of the needy population—the elderly, single-parent families, the disabled, the hard-to-employ, and the unemployed. Associated with these various groups is a diversity of concerns regarding work incentives, training, in-kind provision, an income floor, and accustomed living standards. Clearly, the simplest scheme would be a set of demogrants, which would be undifferentiated or based on just a few easily observed characteristics, such as age. Yet this scheme would not satisfy all of the objectives of income security, and its budgetary cost and attendant marginal tax rates would most likely be prohibitive. Some form of categorization, distinguishing between those who are employable and those who are not, would likely be needed for an acceptable demogrant scheme. And the dictates of horizontal equity mean that tax provisions for child care and large medical expenses will not readily be abandoned.

Despite the hazards, let us suggest a few guidelines to be considered in any simplification exercise. The basic definitions used to operate the separate income transfer programs, including in-kind benefits, should be aligned more closely with the definitions of the personal income tax. That is, the unit, the base, and some of the accounting principles should be better coordinated. The creation of a consistent unit for taxes and transfers will require more changes for Canada than for the United States. Coordinated timing will be difficult to achieve, given the annual accounting period for taxation and the shorter periods used for most transfer and social insurance programs. However, the administration and enforcement of income taxes would be aided by the reporting and verification of incomes, earnings, wage rates, and hours over shorter periods of time; reporting of these items would also be required for improved income support devices, including work-related schemes. One can consider which party should be responsible for supplying information needed to operate a program. If this information is relatively complex, the onus should first be on the tax or transfer administrators, then on employers and other payers, and only last on the beneficiaries. The qualifying conditions for income security programs and tax provisions should also be simplified in ways that are consistent with other policy objectives.

3.9 The Future of the Tax-Transfer System

While reforms to tax provisions for income security have been extensive in Canada and the United States over the past five years, the overall tax-transfer systems have not been fundamentally altered. Both countries had previously instituted forms of guaranteed income for their elderly populations. Canada placed a floor under the incomes of the aged through the OAS, GIS, and provincial supplements, and the United States operated through SSI, state supplements, and the minimum-benefit provision of Social Security. Similarly, both countries provided limited, if inadequate, forms of minimum incomes for their disabled: Canada through Social Assistance and CPP, and the United States through SSI and welfare. Almost all of these earlier policies were enacted outside of the personal income tax. Several changes in tax-based provisions for the aged and disabled have been instituted recently. Both countries have attempted to improve the targeting of lower-income persons. Canada converted deductions for private pension income, aged status, and disability into nonrefundable tax credits, while the United States converted its age and disability exemptions into additional deductions restricted to those claiming the standard deduction. Yet the two countries have moved in opposite directions in their provisions for tax sheltering of retirement savings. Canada has expanded and rationalized access to these provisions at the same time that the United States has restricted access.

A more vital question is how the countries have dealt with the nonaged employable poor and their dependent children. Recent tax innovations in this area have been more numerous in Canada than in the United States. A major and largely successful reform goal for both countries was to reduce income taxation of the poor. Canada has been more generous than the United States in setting its thresholds for taxability, particularly when refundable credits and demogrant payments are considered as offsets to personal tax. But both countries still impose income taxes on many poor, nonaged single persons and on smaller proportions of other groups. In the last several years, Canada has reduced the extent of tax indexation for inflation, while the United States has implemented full indexation of its key tax components. The reforms have also increased targeting of tax benefits on lower-income households. Canada has converted personal exemptions and several other deductible items into nonrefundable credits, expanded the scope and generosity of its refundable credits, and introduced a tax clawback at upper-middle incomes on its demogrant payments.[48] The United States has made less extensive changes to augment targeting: increasing standard deductions and limiting itemized deductions, fully taxing jobless benefits, and clawing back personal exemptions at very high incomes. The earned-income tax credit has been fully indexed but not otherwise enriched.

The income security "system" for each country has evolved by piecemeal additions of new programs and tax provisions and by extensions of existing features aimed at improving coverage, scope, or adequacy. It has proven more difficult to remove or rationalize programs and provisions. Even when reforms are justifiable on horizontal-equity or incentive grounds, they create losers unless funds are added to the system. This pattern of evolution has yielded an accretion of programs and provisions, unanticipated interactions, and cumulative complexity. But the hope that these incremental changes are leading toward a streamlined, radically improved system appears elusive. Refundable child tax credits were heralded at their introduction in Canada in 1979 as the basis for a guaranteed income. Again, in 1987, newly enacted refundable sales tax credits were touted as a building block toward a guaranteed income. Similar hopes accompanied the 1964 enactment of food stamps and the later provision of earned-income tax credits, in the United States. Yet none of these provisions offers a promising basis for a broader guaranteed income, even if they have added to the total support for the low-income population.

3.9.1 The Guaranteed-Income Approach

Existing tax provisions do not lead toward a comprehensive income support scheme because of their poor responsiveness to changes in individual needs. In concept, this deficiency could be remedied through frequent periodic income reporting by beneficiaries and corresponding adjustment of their benefits. But this would entail major administrative resources and would not be easily accommodated within the personal tax system. Another major limitation of the move toward a comprehensive income support scheme for employable nonaged persons and their children is the problem of tax-back rates, incentives, and budgetary cost. Consolidation of all existing support programs and provision of an adequate level of guaranteed income, with few or no losers, would carry unacceptable budgetary costs or excessive marginal tax rates. A proposal for a guaranteed income integrated with the personal income tax, detailed in 1985 by a Canadian Royal Commission, displayed all of these difficulties. In order to provide adequate guarantee levels with reasonable

48. Part of the expansion of refundable tax credits has been simply to offset the incidence of increased federal sales taxes on lower-income households.

work incentives for beneficiaries, effective marginal tax rates had to rise to 49–65 percent for middle-income earners.[49] Severe disincentives to work and compliance facing the poor under welfare would simply be shifted to the much larger bulk of the taxpaying population.

Recent reforms of personal taxation will further constrain Canada and the United States from pursuing the guaranteed-income or negative-tax approach to reforming income security. Tax reform was motivated largely by a desire to reduce the marginal rates of tax while broadening the taxable base. Adoption of a guaranteed income would substantially raise effective marginal tax rates over a wide range of middle-income taxpayers. These tax rates are still rather high at middle and upper incomes in Canada. Indeed, the use of a variety of clawback provisions and benefit phaseouts in the income tax makes the Canadian effective marginal rate schedule both erratic and higher than the nominal rate schedule. Clawbacks and phaseouts apply above thresholds ranging from $18,000 to $50,000 for Family Allowance, Old Age Security, unemployment insurance benefits, and refundable tax credits. These increments to marginal rates are particularly inefficient because they arise at dense parts of the income distribution. In contrast, the higher marginal rates applied for guaranteed-income benefits to the elderly and disabled pose lesser inefficiencies because they apply to groups with much lower earnings capacity. A similar observation applies to the U.S. method of partially taxing Social Security cash benefits, which raises federal marginal tax rates by half across a range of middle incomes.

3.9.2 Work-Related Subsidy and Employability Approach

The primary policy alternative for income security with respect to employable nonaged adults is to expand the use of work-related subsidies. These subsidies can be delivered through the personal tax system, as with the EITC; through the employer, as with employment subsidies or tax credits; or directly to the worker, as with wage-rate subsidies. All forms improve incentives by effectively subsidizing work, but wage subsidies may be preferred for their superior targeting by beneficiary earnings capacity and their greater work incentives. The extent to which a greater emphasis on work-related support will require categorization of persons who are employable and those who are not remains to be seen. Still, relatively generous provision of benefits for those unable to work will strengthen the economic case for categorization. This overall strategy may also involve the provision of public employment at relatively low wages as a last resort for those unable to find private work. Reforms

49. For the proposal, see Royal Commission on the Economic Union and Development Prospects for Canada (1985); for a critique see Kesselman (1986). Leman (1980) provides a historical account and policy analysis of the failure of earlier proposals for guaranteed incomes in Canada and the U.S.

to UI to improve incentives for reemployment and more stable jobs, particularly in Canada, have an obvious role. Both countries have already made limited moves toward a work-related approach through policies for employment tax credits, wage and training subsidies, work requirements in welfare, and earnings subsidies or tax credits.[50]

Reinforcing the work-related subsidies for employable adults would be a wide range of policies to improve the market earnings capacity of low-skilled, poorly educated workers, and to help their children avoid similar problems when they enter the labor market. This approach to income security reflects an increased emphasis on attacking the causes of poverty and low incomes and a reduced emphasis on alleviating the symptoms. Suitable policies might include improvements in the following areas: institutional and on-the-job training, apprenticeship programs, public education, adult literacy, day care, employment counseling, special public employment, enforcement of support payments, and employment or pay equity. Many policies have been tried previously in these areas; the present challenge is to improve their content and delivery, as well as to find an effective mix of policies. This is an ambitious agenda, and the trade-offs with conventional income support will be difficult. Moreover, these policies have long gestation periods before producing results that ultimately reduce the ongoing costs of providing income security.

Supporting children in lower-income households is another important aspect of income security. Receipt of benefits is tied directly to the presence of children under some provisions (welfare in both countries and the EITC in the United States). Welfare receipt is conditional upon nonemployment in most instances, whereas EITC benefits are tied to earned income. It may be fairer, and simpler, to provide child benefits unrelated to the work-force attachment of the parent, as with Family Allowance and refundable child tax credits in Canada. Any earnings- or work-related subsidies or tax credits would then be provided to adults irrespective of the presence of dependent children. The child benefits could be income tested, either prior to payment or through a clawback device in the income tax. However, it would make sense to target the net benefits on families at low incomes, so that the clawback rates do not affect middle- or upper-income earners. The existing clawbacks on Family Allowance in Canada and on child tax exemptions in the United States affect taxpayers at middle and upper incomes, respectively. With a partial clawback, child demogrants could also serve to differentiate net tax burdens by family size at higher incomes in a simple and nondistorting fashion. Whether one chooses to provide such differentiation hinges on value judgments, as noted earlier in the study.

50. Both countries have delivered tax credits through the employing firm. Canada began an employment tax credit in 1978. The U.S. instituted the New Jobs Tax Credit program in 1977 and converted it to the Targeted Jobs Credit in 1979; these provisions were predated by a "work incentive" tax credit for employers of AFDC beneficiaries.

3.9.3 Future Policy Structure and Harmonization

Recent reforms in Canada and the United States reveal a willingness to experiment with tax-based provisions for income security. The extent to which future income security functions are embedded in the tax system, as opposed to spending programs, will hinge upon a host of practical considerations. These include the administrative needs of responsiveness, frequency of payments, the relation between the tax and transfer unit, the relation between the measure of need and the taxable base, publicity costs and take-up rates, and social factors such as the stigma for beneficiaries. Insofar as the policies are structurally tied to training or employment, it is harder to operate them through the income tax, with the exception of an earnings tax credit. Regardless of their exact content, future reforms should ignore the distinction between direct expenditures and tax expenditures. Choices between a tax method and a spending approach should consider only the net revenue costs, vertical incidence, horizontal equity, efficiency costs, incentives, and the delivery aspects cited here (see Kesselman 1990a). It is notable that most recent proposals for reforming income security in both countries, ranging across the ideological spectrum, include tax-based provisions.[51]

Early in this study the main external constraint on the development of the two countries' income security was identified as industry-specific issues. Migration of labor between Canada and the United States was dismissed as unlikely to constrain the levels or structures of each country's income security system, at least as long as steep barriers to immigration remain for most population groups. Yet one could turn the problem around and ask whether the desire for a distinct structure or level of income security in a country such as Canada might inhibit the acceptance of reduced barriers to labor mobility. This would in fact seem to be a realistic proposition. It is hard to imagine Canada, with its universal medical coverage, opening its doors to all American workers. With totally open borders each individual could shop to find the country that maximized his or her income security benefits net of tax burden. Then each country, and particularly Canada as the smaller one, would be severely limited in its ability to pursue independent policies of income security or redistribution. If Canada and the United States wished to integrate their labor markets while still preserving redistributive functions, new institutional arrangements would be required.[52] One approach would be a mutually agreed and coordinated—and perhaps jointly operated—set of income security policies. In other words, the two countries would have to pursue income security policies on a harmonized basis.

While current pressures for harmonizing the Canadian and U.S. income

51. For Canadian examples, see Courchene (1987), Kesselman (1985), and Mendelson (1986); for U.S. examples see Ellwood (1988), Glazer (1988), and Haveman (1988).

52. These issues are discussed in the context of European integration by Sinn (1990). Also see Wildasin (1991), which leads to similar conclusions.

security systems are mostly limited to industry-specific policies, some broader economic forces may also be operative. These pressures do not stem so much from the other country as from the rest of the world and from domestic sources. Both countries face increasingly severe competitive pressures from overseas producers.[53] And both countries face large, continuing budgetary deficits at their federal levels. These considerations and the desire for higher real living standards may incline both countries to devise income security policies that are efficient and promote productivity. They will intensify recent interest in reorienting welfare programs toward work and enhanced employability.[54] They may also lead Canada away from universal programs such as demogrants and health insurance, though such a move would be based on the misconception that universality is inherently inefficient. A wide range of educational, training, child care, and other work-enhancing policies will likely play significant roles in a productivity-oriented approach. The two countries will undoubtedly retain major differences in the institutional manifestations of their income security and related tax policies. Yet one might anticipate a longer-run convergence of Canadian and U.S. policies toward greater efficiency and productivity. One can hope that the policies, with some care in their design and with adequate political support, will also serve well those in need.

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53. See Courchene (1990) and Osberg (1990) for views on how growing international competition may impinge upon the future development of income security provisions.

54. Gueron (1990) provides a useful review of what has been learned from U.S. initiatives in this area.

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