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Rethinking Tax-Transfer Policy for 21st Century Canada

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> ... licensed by the apparent support of authority and law, minimizing one's tax burden rather than any notion of community burden-sharing has become the contemporary ethic... Taxes are grants and the degree of their voluntariness is the measure of a society's capacity to agree on collective purposes and needs, and to concur in the collective means by which they will be served and provided. (Stewart, 1986a, p. 118)

> ... only if a strong majority of taxpayers can come to recognize that they have a personal stake in the success of the reform process, can it withstand the pressures for retreat which ultimately stampeded the federal government into rejecting the principles and proposals of the Carter Commission. And only radical reform can restore

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> a public commitment to the provision of public services and their financing. Equity, neutrality and ease of understanding may be principles of reform more capable of withstanding the assaults of special interests than any more incremental process. (Stewart,1986a, p. 126)
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> Contrary then to what might be called today's conventional wisdom, the reworking of distributional and redistributional arrangements to sustain interpersonal equity and support might make a fundamental contribution to the easing and accommodation of the structural pressures of today and tomorrow. (Ian Stewart,1986b, p. 312)

TAX-TRANSFER POLICY FORMULATION was one of Ian Stewart's many responsibilities over the course of his distinguished career as a public servant. His writing during a stint as Skelton-Clark Fellow at Queen's University while on leave from the public service displayed remarkable candor about his views of the principles that ought to govern tax-transfer policy. Efficiency and simplicity were important. But, more important, fairness and social decency were necessary not just for their own sake, but for avoiding what he called 'share quarrels' that eroded the social contract by which citizens voluntarily contributed to society. He shared this view with the Carter Commission of two decades earlier, which said "Unless the allocation of the burden is fair, the social and political fabric of the country is weakened and can be destroyed" (Royal Commission on Taxation, 1966, ch. 1). This led Ian to argue for a fair and efficient system with a broad base, minimal tax expenditures, and the lowest tax rates consistent with an equitable system. He also argued for integrating social transfers with the income tax system so as to achieve adequate targeting of transfers with minimal tax-back rates and less demeaning needs-testing, and for maintaining the federal leadership role in the tax-transfer system as indispensible for a fair and harmonized tax-transfer system. Not surprisingly, he was a principal architect behind the introduction of refundable tax credits, arguably one of the most important innovations in recent years, and he pursued other objectives vigorously, like the rationalization of interest deductibility provisions. His approach was prescient. The principles he espoused remain as relevant today as ever.

Introduction

The tax-transfer system in Canada serves many public policy purposes, including such diverse objectives as revenue-raising, income redistribution, social insurance, social policy, equality of opportunity, retirement income policy and human capital policy. The broad architecture of tax-transfer policy has evolved piecemeal since the days of the Carter Commission (Royal Commission on Taxation, 1966), with some episodes of innovative measures.[2] Occasionally, major reform proposals have been made for the rationalization of broader aspects of the tax-transfer system, including the Macdonald Commission (Royal Commission on the Economic Union and Development Prospects for Canada, 1985), the Economic Council of Canada (1987), various targeted proposals for pension and Employment Insurance (EI) reform, and the Mintz Report (Technical Committee on Business Taxation, 1998) on business tax reform. Relatively few coordinated policy measures have come out of these proposals. A rethinking of the existing system and how it serves its many objectives would be timely.

There are a number of reasons why a major rethinking of the Canadian tax-transfer system is warranted, apart from the seeming incoherence of the current system as a whole. First and foremost, views about what constitutes an effective tax-transfer system have evolved considerably in the past few decades. This evolution is best captured in the recent Mirrlees Review (2011) in the United Kingdom entitled *Tax by Design*, which is a comprehensive review of the best principles and practices of tax design. It draws heavily on the cumulative literature on the theory and empirical foundations of tax policy. Although this was written in the context of the United Kingdom, its contributors were noted experts from around the world, and its analysis and recommendations have resonance elsewhere, including in Canada. Similar major tax reform proposals have recently been completed in the United States (the Pres-

2 These include tax-assisted retirement savings schemes (Registered Pension Plans (RRPs), Registered Retirement Savings Plans (RRSPs), Tax-Free Savings Accounts (TFSAs)), the Tax Collection Agreements (TCAs), the Goods and Services Tax (GST) and the Harmonized Sales Tax (HST), refundable tax credits, the replacement of deductions with credits, the income-testing of various transfers, and the implementation of activist labour market and various human capital incentive schemes.

ident's Panel, 2005) and in Australia (the Henry Review (Australian Treasury (2010)), though not as yet implemented. Indeed, attempts by the Australian government to implement the mining tax proposals of the Henry Review, eminently sensible as they were, precipitated the fall of the Prime Minister, indicating how politically fraught tax reform can be. There is no doubt that the time is ripe for such a rethinking for Canada, given some of the unique issues we face.

A second reason for rethinking the tax system is that the world has changed. Economies are more open to international competition and the mobility of factors of production that entails. Labour markets have changed dramatically: female participation has increased; volatility of earnings and job insecurity have increased; skills have become more important; unionization in the private sector has declined; pension plans have been threatened; the workforce is aging; and the industrial structure has undergone fundamental changes. The ability of a tax system designed for earlier times to cope with these changes is limited.

As a result of these and other factors, inequality has increased considerably, and at the same time, tax-transfer policies have become less redistributive, as the OECD (2008) study *Growing Unequal* has documented. In Canada, in particular, redistribution has become much less effective, except for some segments of society (the elderly, children). The rate structure of the tax system as a whole has flattened considerably, especially at the provincial level. Transfers to the least advantaged have worsened significantly, with real welfare payments to the disabled and long-term unemployed falling fairly dramatically over the last 30 years.

As well, budgets are becoming tighter as governments retrench from the recent recession, as the cost of basic public services rise in relative terms, and as the population ages. There are also new demands that are being put on the tax-transfer system, such as environmental externalities, the treatment of natural resources, and the desire to encourage human capital investment as part of an equal-opportunities agenda.

All of this suggests that the tax-transfer system needs to be smarter, and arguably much more targeted than has been the case in the past. The purpose of this paper will be to outline the key elements of the design of a tax-transfer

system that might address these challenges. This will draw on lessons from the tax-transfer policy literature as well as proposals that have been made elsewhere, such as the Mirrlees Review. There are unique features of the Canadian economy that will condition one's views, including especially the decentralized nature of the Canadian federation, the reliance on natural resources and the openness of the economy. But, the end objective of an effective tax-transfer system is the same: how to raise revenues in the least costly way and subject to tight budgets, while at the same time achieving redistribution, social insurance and equality-of-opportunity goals.

In contemplating a rethinking of the tax-transfer system, we shall purposely eschew political constraints, despite the experience in Australia. This is not because political considerations are not critically important in carrying out an agenda of tax reform. It reflects instead a conviction that the political process can be best informed about the desirability of alternatives if they are proposed on the basis of normative principles without being constrained by perceived political feasibilities. Indeed, since political constraints are themselves malleable, limiting the discussion to what appears to be politically feasible in the short term might unnecessarily rule out otherwise beneficial alternatives.

Concerns with the Existing Tax-Transfer System

The Canadian system of taxes and transfers has many attractive features. The overall mix of the main revenue sources — income, sales and payroll taxes — is fairly well-balanced, and the division of the tax room between the federal and provincial levels of government serves the federation well. The structure of the GST is efficient by international standards, and the HST mechanism in place for harmonization with provincial sales taxes is reasonable, despite its less-than-universal uptake by the provinces. The Tax Collection Agreements (TCAs) for income tax harmonization have many attractive properties. Some of the details of the tax-transfer components are well-conceived as well. This includes the imaginative use of refundable tax credits, the system of tax assistance for retirement savings, the income tax treatment of housing, some elements of the treatment of human capital investment and the public pension system. However, several problems remain, and we identify them in this section, in no particular order of importance.

The Business Tax System

Problems abound with the way in which businesses are taxed. The corporate tax system systematically favours some industries, such as natural resources and manufacturing, at the expense of others. The structure of the corporate tax invites distorting behaviour, especially to exploit the deductibility of interest expenses. The system does a relatively poor job of taxing rents, which is a serious drawback in an economy that relies heavily on primary industries. The system also favours large, established firms at the expense of young firms, especially those engaged in risky and innovative activities. Especially important in this regard are interest-deductibility, the absence of full loss-offsetting of risk, and the favourable treatment of intangible investments such as advertising. Sales taxes remain an impediment to competitiveness in those provinces that retain retail sales taxes (Manitoba, Prince Edward Island and Saskatchewan). And, property taxes on business represent profit-insensitive levies, which are not related to local business services and act as a deterrent to investment.

Business tax problems are exacerbated by the fact that some businesses are incorporated and others are personal firms. In an attempt to treat personal businesses on a par with small corporations, so as not to discourage incorporation and to treat capital income the same whether earned directly or through corporations, governments have provided preferential treatment to the latter in the corporate tax system. This runs the risk of distorting the treatment of small versus large corporations. Chen and Mintz (2011) argue that the small business tax rate can deter growth by encouraging small size firms to form and by discouraging firms from growing larger.

Especially problematic is the treatment of natural resources, particularly non-renewable ones. Given that natural resources are public endowments, revenue systems should aim to recover a reasonable share of resource rents for the public sector in an efficient manner. The systems actually used are neither efficient, as evidence of marginal effective tax rates confirms, nor capture a reasonable share of rents for the public sector (though this share is considerably enhanced to the extent that auctions for licenses to explore for natural resources and leases to develop them are efficient). This is true of both provincial resource tax systems, which are exclusive sources of revenue to the prov-

inces, and also the corporate tax system, which is a main way in which the federal government can obtain a share of resource rents. Some resource taxes, especially in oil and gas, are also subject to discretionary revision as resource prices change, leading to political uncertainty that itself is detrimental to efficiency.

The manner in which non-renewable natural resource revenues are husbanded is very problematic. Rather than setting them aside in a fund to be amortized for the use of future citizens, they tend to be spent on either current services or on the promotion of local industry. The result is an exacerbation of the so-called 'resource curse', which does significant damage to other provinces' economies (Boadway, 2009). This is undoubtedly a consequence of the feature of the Canadian federal system whereby natural resources are 'owned' by the provinces, but it has troubling consequences for Canadian public policy that cannot be ignored in contemplating reforms.

Finally, the pricing of environmental damage, whether due to global warming, congestion or local pollution, remains very uneven. From a social point of view, this is detrimental. As well, governments — including the federal one — are forgoing a potentially important source of revenues that could be used to relieve the burden of other taxes.

Individual Income Tax

The personal tax system pays lip-service to the comprehensive income tax ideal of the Carter Report, but in reality it is a messy compromise between income taxation and progressive expenditure taxation. Its structure is contradictory, and it does a mediocre job of achieving equity, a task for which it is uniquely suited.

The contradictions concern the treatment of asset income. Capital income that is taxed is treated on a par with labour income, as an income tax system would suggest. However, a significant amount of asset income is not taxed. It is useful, following the Mirrlees Review (2011), to make the distinction between two forms of sheltering: i) the EET system, which exempts savings when they are made, exempts capital income as it accumulates and taxes accumulated principal and interest on withdrawals, and ii) the TEE system, which taxes income before it is saved, then exempts both capital income as it accumu-

lates and exempts withdrawals when the asset is run down.[3] Savings for retirement up to specified limits are either given EET treatment (RRPs and RRSPs) or more recently TEE treatment (TFSAs). Savings in excess of the limits are fully taxed. Housing and other consumer durables are treated as TEE, although housing does incur property tax payments for local services. Human capital investment gets EET treatment as far as forgone earnings are concerned, but financial costs are not deducted.[4] Instead, there is a system of partially refundable tax credits that are limited in size and bear only an indirect relation to actual costs. There is also the Registered Education Savings Plan (RESP) system that implicitly reduces the borrowing costs of financing post-secondary education. Capital income from unincorporated business assets are in theory taxed as ordinary income, but this is necessarily done imperfectly, and crucially, losses are not treated symmetrically with gains. Finally, earnings from ownership of Canadian corporations are afforded some credit for corporate taxes having already been paid via the dividend tax credit and preferential treatment of capital gains, but the crediting is very imperfect, especially for capital gains.

The result is a system that treats different forms of capital income arbitrarily differently. It differs from what theory would suggest, which would be for either no taxation of capital income or uniform taxation at rates lower than labour income tax rates. Many countries around the world have addressed this problem, especially in the European Union, by adopting schedular systems that systematically impose a different rate structure on capital income compared with earnings.

3 The letters E and T in the acronyms EET and TEE indicate whether assets are exempt or taxable during the three phases of i) asset acquisition (exempt from the tax base or not), ii) accumulation of capital income (exempt or taxable) and iii) running down of the asset (accumulated principal and interest exempt or taxable). As the Mirrlees Review noted, these tax treatments are equivalent in present value terms except to the extent that super-normal returns are made on assets. We discuss this further below.

4 Forgone earnings are given implicit EET treatment since it is as if they are fully deducted from the income tax base: one's tax base falls by the full amount of forgone earnings and rises again when the forgone earnings give rise to future augmented earnings, comparable to, say, saving in RRPs for retirement.

The inclusion of unsheltered capital income along with earnings in the tax base has another deleterious effect, and that is to compromise the progressivity of the income tax, especially at the upper end. An important factor in the determination of the rate structure is the responsiveness of the tax base to the tax rate, the so-called elasticity of taxable income (Feldstein, 1999; Gruber and Saez, 2002; Department of Finance, 2010). One expects that this is higher for capital income than earnings because of the greater freedom to change one's capital income by tax planning, relocation and outright evasion. If capital income were taxed separately from labour income, concerns with high tax rates at upper-income levels might be mitigated. Given that much of the recent growth in income inequality comes from earnings inequality rather than capital income, especially at the upper end (Piketty and Saez, 2006), it could be argued that anything that makes redistribution easier at the upper end is welcome.

There is a more general problem of eroding progressivity in the tax-transfer system. Progressivity is determined mainly by the rate structure of the income tax and the system of transfers to low-income persons. The rate structure has become flatter in recent years, and this has been most pronounced at the provincial level. As the provinces have acquired more and more income tax room, and have as a result successfully argued for more discretion in their rate structure, they have adopted much flatter rate structures than that of the federal government. This has been partly compensated for by converting most tax deductions to tax credits, which add progressivity to the rate structure for those liable to pay taxes. More important, the advent of refundable tax credits, which are themselves income-tested, has added a potentially important source of progressivity at the bottom end by reaching those with no positive tax liabilities. This has been of special importance for low-income families with children and to some extent low-income workers, but the amounts involved are far from adequate to address the needs of the poorest.

Transfers to Low-Income Persons

Those who must rely on social assistance, especially the disabled and employable singles, receive what can only be called a pittance with which to survive. Welfare incomes, including both social assistance and refundable tax

credits, remain well below poverty levels and have been falling in real terms since the mid-1990s (National Welfare Council, 2010; Boadway and Cuff, 2011). This is a national disgrace. Provincial welfare systems also have incentive problems. Earnings limits are extremely low, and tax-back rates tend to be 100 per cent once those limits are reached. As well, asset ownership restrictions make saving unattractive even if resources permitted.

Federal low-income transfer programs have been less draconian than at the provincial level. Transfers to the elderly through the OAS-GIS have been relatively successful at lowering poverty rates for the elderly, and are well-targeted to the neediest, despite complaints that this has reduced incentives to earn and save. Tax credits for children have also been helpful, although their targeting has not been particularly tight. The EI system on the other hand, has relatively little redistribution built into it. Financing by payroll taxation is very regressive, and benefits have only limited redistribution built in through extra assistance to low-income workers with families and some tax-back of benefits to higher-income workers.

Indeed, more generally, the decentralization of revenue-raising responsibilities to the provinces has coincided with a reduction in redistribution in the system as a whole, and it is not hard to imagine an element of causation. As mentioned, the transfer of income tax room to the provinces has resulted in a less progressive income tax system. Those groups of low-income persons for which the provinces are responsible — the disabled and the long-term unemployed — have fared less well than those for whom the federal government has assumed responsibility — children, the elderly and the short-term unemployed. Further back in time, when inheritance tax was transferred to the provinces, they soon abandoned the field. There are exceptions to this, of course. Provinces have maintained universal health care systems. Quebec has been particularly aggressive with respect to children, though less so with respect to the disabled and the long-term unemployed. And, the federal government's record with the Aboriginal population has not been stellar. Nonetheless, there is apparently some substance to the idea that fiscal competition can lead to a race to the bottom.

Indirect Taxes

The structure of the federal GST is sound, though the rate is arguably unreasonably low, not just for efficient revenue-raising purposes, but also for pursuing further harmonization with the provinces. Probably, one lesson we have learned from the TCAs is that it is more difficult to maintain a fully harmonized system the less tax room the federal government has. For better or for worse, as the provinces obtained more income tax room, they demanded more say in tax policy, and this resulted in more discretion over the rate structure and the system of income tax credits. So far, the principle of a common base has been maintained. The argument is that the same issue could arise with the GST/HST as the federal share of HST revenue falls relative to the provinces'.

In the case of sales tax harmonization, the danger is that the integrity of the HST system will be eroded as more provinces join in. Allowing a different set of exempt or zero-rated products in different provinces complicates the system unnecessarily. One lesson we have learned from tax theory, and one that has been elegantly defended in the Mirrlees Review (2011), is that redistribution is more efficiently pursued by the direct tax system than by differential sales tax rates. The system of refundable tax credits is a suitably progressive complement to the GST/HST that renders further exemptions unnecessary and counterproductive. Moreover, a system that has fewer instances of preferential treatment is administratively less complex. Whether the federal government can succeed in convincing all provinces to replace their PSTs with a broad-based HST is an open question. In fact, the HST system introduced in British Columbia and Ontario has already compromised the principle of a common base by allowing certain items to be exempt from the provincial portion of the HST (e.g., children's clothing, footwear, diapers and car seats; books and newspapers in Ontario; residential energy in British Columbia).

More important than the HST rate structure across goods and services is the fact that different provinces are now allowed to set their own rates as part of the HST, unlike when the HST was first introduced in three of the Atlantic Provinces. Thus, the rate is 13 per cent in New Brunswick, Newfoundland and Labrador, and Ontario, while it is 15 per cent in Nova Scotia and 12 per cent in British Columbia, falling to 10 per cent in 2014. This too makes the system

unnecessarily complicated administratively. Operating a value-added tax system in a fully decentralized way is a recipe for complexity and an invitation to unscrupulous producers taking advantage of the absence of border controls to set up schemes of evasion that are all too well-known from experience in the European Union. Fortunately, the existence of the Canada Revenue Agency as the sole tax-collecting agency for the HST mitigates the problem considerably, but it remains to be seen how well the system can sustain different tax rates across provinces.

The Quebec sales tax (QST) system is the exception to a harmonized system with a single tax-collecting agency. Although the QST base is reasonably well harmonized with the GST, both the QST and GST are collected by the Quebec revenue agency. This introduces additional collection and compliance costs, and opens up the possibility of difficult enforcement at the borders.

What we are left with is a system in which half of the provinces participate in the HST with its single tax-collecting agency, albeit with different rates and slightly different bases, while Quebec maintains full discretion over its sales tax rate and collects its own revenues separately along with the GST. This has strayed some way from the original HST system joined by New Brunswick, Newfoundland and Nova Scotia with its high degree of base and rate harmonization. The principle has now been established that provinces that join the HST have some discretion over their rates and bases. Whether the extra accountability presumably achieved from this discretion outweighs the additional administrative complexity now and in the future is an open question.

Equality of Opportunity

Equality of opportunity is a dimension of fairness to which all governments pay lip service, and to which the Canadian Constitution in principle commits both levels of government in Section 36(1). There are a number of policies that have equality of opportunity as a rationale, such as public education, health care and various constraints imposed by the Charter of Rights and Freedoms. Refundable tax credits for children are presumably motivated by equality of opportunity, the idea that children ought to have comparable chances to succeed regardless of their socio-economic background. The same could be said for early childhood education and childcare policies. To achieve

equality of opportunity successfully would require tax credits and in-kind transfers to be well-targeted to children most in need. Although the Canadian system of targeted transfers for children and for services for children may not go as far as some would like, the basic structures are in place that can be built on.

The case of post-secondary education is less clear. There exists a myriad of policy instruments available both in the tax-transfer system and alongside it. We have mentioned the implicit deductibility of forgone earnings, which corresponds with cash-flow, or EET, tax treatment. However, that is not as generous as it might seem since the rate of tax applicable to forgone earnings is typically much less than that paid later on, given the progressive income tax rate structure. This constitutes a disincentive to invest in human capital. Full EET treatment for post-secondary education would also include full and refundable deductibility of financial costs for which the current system of education and tuition credits is an imperfect and inadequate substitute. In addition, RESPs seem largely to be a windfall gain to families who can afford to save for their child's education (Milligan, 2005), although it may be a nudge policy for those who, though they can afford it, would neglect to save sufficiently because of present-biased behaviour. One could argue that post-secondary education includes an element of consumption as well as investment, and on that account should bear some tax. On the other hand, there may well be externalities associated with education that work in the opposite direction. More generally, human capital investment takes place in many ways besides post-secondary education, such as training, work experience and so on. In principle, similar sorts of policy considerations should apply to these other forms, although there are undoubtedly difficult administrative problems that would have to be taken into account in a more detailed approach.

A more serious concern from an equality-of-opportunity perspective is that there are sources of market failures associated with post-secondary education. Three are particularly important. One is that education is a particularly risky form of investment, for which standard forms of insurance or risk-pooling are inadequate. The second is that, given the difficulty of borrowing against one's human capital, liquidity constraints are prevalent, particularly for persons coming from low-income families. Finally, and related to the latter, persons

from disadvantaged socio-economic backgrounds who are both able and motivated face the double disadvantage of inadequate resources and poor preparation to succeed. The current system deals with these issues mainly through a system of government-backed student loans combined with a spotty system of grants targeted to those from needy backgrounds or those with superior abilities. Post-secondary institutions typically offer their own financial assistance as well, depending on their resources.

The result is a system that is inadequate in dealing with risk and in targeting the neediest able students, and that relies too much on educational institutions themselves as gatekeepers of student aid. Policy instruments exist that can deal jointly with risk and liquidity constraints, such as income-contingent loans or their equivalent. Moreover, grant schemes could be designed that are more effective at targeting those most in need than the mix of refundable tax credits and student aid schemes now offered. Indeed, the structure of the recently introduced Canada Student Grant Program could readily be enhanced.

One final area where Canadian tax policy fails to address equality of opportunity is the treatment of intergenerational transfers. Being born into a privileged family is an enormous advantage. Life outcomes are influenced not just by the ability of better-off families to finance opportunities both inside and outside the education system, but also by the transmission of human capital across generations through intra-family learning and skill transmission. The hallmark of an equitable tax-transfer system is its ability to redistribute among persons according to the advantages that they are endowed with through luck of birth. The income tax does this on the basis of earnings and to some extent capital income. Earnings partly reflect the advantages of parental well-being, and capital income includes the return on inherited wealth: indeed, one of the arguments for taxing capital income is precisely to get at returns to inherited wealth. However, the benefits of inheritances per se are not taxed in Canada. Instead, accrued capital gains on inheritances are taxed, which is a highly inadequate way of dealing with inherited wealth.

Tax by Design: The Mirrlees Review

The Mirrlees Review was initiated to mark 30 years since the publication of the influential Meade Report (Report of a Committee Chaired by Professor James Meade, 1978) in the United Kingdom. The latter, along with the U.S. Treasury Blueprints (1977), represented an abrupt change in personal tax policy prescription from the traditional advocacy of Haig-Simons comprehensive income taxation, of which the Carter Report (Royal Commission on Taxation, 1966) was the pinnacle. Like the Meade Report, the Mirrlees Review was written by a committee of tax policy experts, but it went further in some important respects. For one, it studied the entire tax system, including income taxes, social insurance contributions, sales taxes, and excise taxes, especially environmental ones. For another, it relied heavily on the cumulative economic literature on optimal tax theory and policy, and it grounded its recommendations on thorough empirical analysis. And, its advice included not only recommendations for structural reform of the tax base but also detailed recommendations about reform of the rate structure that were meant to be roughly revenue-neutral and distribution-neutral. In effect, the aim of the Mirrlees Review proposals was to extract revenues in the most efficient way consistent with given redistribution objectives and required revenues. While the context for the Mirrlees Review recommendations was the U.K. tax system, it provides a useful template from which to consider reforms in Canada.

The main elements of the Mirrlees Review proposals are straightforward and can be summarized as follows:

- The proposed direct tax base for individuals was an elaboration of the expenditure tax proposals of the Meade Report. The latter proposed sheltering of capital income using one of two methods, TEE (tax-prepaid) and EET (registered), and would allow taxpayers some discretion in treating their assets in either way. The Mirrlees Review added a third option, a Rate-of-Return Allowance (RRA), referred to as TtE treatment. It taxes the return on assets in excess of normal returns (the lowercase t), and would be applied mainly to equity income: housing and interest-bearing assets would be treated as TEE, while pensions would be EET. In fact, RRA treatment is equivalent to EET in the sense that it taxes excess asset returns (or credits losses), but it does so earlier in the life of the asset. The

Mirrlees Review deemed this to be an advantage, despite the administrative costs of RRA versus EET.

- Particular attention was paid to ensuring that the rate structure of all taxes and transfers taken together did not have adverse incentive effects, particularly with respect to the labour force participation decision. The latter is especially important for parents of children beyond infancy and above and persons nearing retirement age.
- The corporate tax system would take the so-called Allowance for Corporate Equity (ACE) form, which is the equivalent of the cash-flow tax recommended by the Meade Report. This is a neutral tax system that taxes rents, but results in tax liabilities earlier in an investment's life than a cash-flow tax. This is the analogue of the RRA at the personal level, and would apply to unincorporated businesses as well.[5]
- The other direct tax would be a tax on inheritances received over a taxpayer's lifetime, whether transferred on death or *inter vivos*. This also finds its close analogue in the Meade Report. It would serve an important equality-of-opportunity objective, and would complement the fact that normal returns to saving would not be taxed.[6]
- The VAT system would move to a fully uniform one by eliminating exempt and zero-rated goods and services, and accompanying it with adjustments to the income tax system to maintain distribution-neutrality. (Special treatment for financial services and housing would apply.)
- Social insurance contributions, which give rise to various anomalies in the overall rate structure in the United Kingdom, would be harmonized with the income tax so that a single rate schedule applied to both.
- A single carbon tax would replace the existing incoherent system of fuel charges and would apply uniformly to all emissions sources (taking due account of sources that were already subject to the EU emissions trading

5 As discussed later, ACE treatment involves adding all capital expenditures to an account, applying a risk-free interest rate to the value of the account as a tax deduction each year, and reducing the account annually by a depreciation rate.

6 The rationale for such a tax is outlined in Boadway, Chamberlain and Emmerson (2010).

system). As well, a road congestion tax would be applied nationwide, and revenues from both environmental charges and congestion pricing would go into general revenues.

We turn next to what we might take from these proposals for the Canadian context.

Tax by Design for Canada

As mentioned, the Mirrlees Review proposals were devised mainly with the U.K. tax system in mind. However, most of the recommendations have resonance for other countries, including Canada. At the same time, there are some key differences between the circumstances facing Canada and the United Kingdom that would make wholesale adoption of the proposals problematic. First, Canada is a federal country in which a significant share of tax room is occupied by the provinces. This raises issues both of tax design and harmonization. It also raises important issues of coordinated policy-making in the area of transfers to low-income persons, given the important role the provinces play in that regard. Second, natural resources are much more important in Canada than in the United Kingdom, and give rise to special problems given their decentralized ownership. Third, Canada has no tax on bequests or inheritances, while the United Kingdom does. While in principle this ought not to detract from recommending that lifetime inheritances be taxed, it would involve a more significant reform than in the United Kingdom where a tax on bequests, albeit very imperfect, already exists. Fourth, congestion pricing does not assume the urgency in Canada as it does in the United Kingdom. Environmental pricing presumably does, although important coordination issues both with the provinces and with the United States must be taken into consideration. Finally, for whatever reason, the Mirrlees Review paid no attention to the tax treatment of human capital accumulation. This is unusual, given the debate in the United Kingdom over student fees and student financing of post-secondary education.

These considerations suggest that the application of tax reform principles to Canada would likely emphasize somewhat different features than in the Mirrlees Review. At the same time, since we would draw on a common body of literature, one would expect there to be considerable overlap. This was certainly

the case for the President's Panel (2005) in the United States and Henry Review (Australian Treasury, 2010) in Australia. What follows is some musing about what proposals a document entitled "Tax by Design for Canada" would contain.

Individual Income Tax

The design of the individual income tax is critically important since it not only raises the most revenue but also is the main tax instrument used to deliver equity objectives. There are three main issues: the choice of the base, the choice of the rate structure, including refundable tax credits, and the harmonization of federal and provincial taxes. Other issues that we do not have space to deal with include the taxpaying unit (individual, family, etc.), the use of the tax for influencing behaviour, and international aspects of individual taxation.

The choice of the individual tax base is dominated by the treatment of capital income, or equivalently, the case for taxing present and future consumption at differential rates. The theory poses the question this way: what is the most efficient way to raise revenues over the life-cycles of heterogeneous households so as to achieve a desired amount of redistribution, defined on a lifetime basis, while satisfying an intertemporal budget constraint.[7] The theoretical prescription is agnostic, especially when practical considerations such as administrative complexity, evasion, and individual behavioural anomalies are taken into account. We can, however, identify some broad arguments for and against taxing capital income.[8]

One main argument in favour of taxing capital income is that in the absence of a tax on wealth transfers, some persons have sources of purchasing power that would otherwise go untaxed. This is the case under most bequest or inheritance taxes, which typically affect only the relatively wealthy and exclude transfers other than bequests. In the current Canadian context, this argument

7 In the literature, matters are made more complicated by the requirement to satisfy an information constraint, which precludes high-earners from wanting to mimic low-earners. Moreover, the income tax system may be called on to achieve intergenerational redistribution in the event that there are restrictions on instruments of intergenerational transfers, such as debt.

8 Banks and Diamond (2010) give a detailed summary of the case for taxing capital income. See also the Mirrlees Review (2011), Chapter 14.

carries considerable weight. A further argument is that high-income persons tend to have higher preferences for saving, because they are more patient and because they expect to live longer. Taxing saving is an indirect way of taxing their earning ability (which is the ideal basis for redistributive taxation, for which actual earnings is an imperfect proxy). Related is the argument that saving, or future consumption, is complementary with leisure, so taxing it is an efficient way of indirectly taxing leisure, which would otherwise be untaxed despite the fact that it, like goods and services, is a source of individual welfare. More technical arguments involve uncertainty and liquidity constraints. If future earnings are uncertain, so the need for saving is itself uncertain, taxing saving will implicitly redistribute from those who turn out to have high income to those whose incomes are lower. At the same time, if individuals are liquidity-constrained, taxing capital income is a way of postponing tax liabilities until later in the life-cycle when the constraint no longer binds. A recent paper by Conesa, Kitao and Krueger (2009) has simulated the U.S. tax system using an overlapping-generations model with uncertain earnings and liquidity constraints, and has argued that a plausible optimal tax rate on capital income is about 35 percent.

The case against taxing capital income is equally compelling. Taxing capital income is administratively complex and not all forms can be included. Capital gains cannot be taxed on accrual, so a corporate tax backstop is needed along with a system of integration. Inflation indexing is a necessity; taxing the imputed incomes of consumer durables, unincorporated business income and human capital income are almost impossible; and in the absence of full loss offsetting, investing in risky assets is discouraged. Since not all asset income can be taxed, asset allocations are distorted. As well, despite the theoretical gains from taxing capital income, these may be small compared with the distortions in behaviour induced by capital income taxation. To the extent that saving is a vehicle for life-cycle consumption smoothing, a capital income tax is a distortion with very little gain in equity. Indeed, it discriminates against those with more variable earnings streams. Taxing saving might also be considered as detrimental to the extent that saving is already too low for behavioural reasons, especially saving for retirement. The less saving people do for their retirement, the more might the state feel obliged to come to their rescue.

It is sometimes argued that capital income should be taxed because higher-income persons have relatively more capital income than low-income persons. However, this ignores that fact that the rate structure can be chosen independent of the tax base, and that can typically undo any adverse distributive consequences of eliminating capital income from the base. In fact, including capital income in the base may actually constrain the progressivity of the income tax. To the extent that the elasticity of capital income with respect to the income tax is higher than for earnings, especially at high income levels, inclusion of capital income in the tax base can discourage progressivity. This is an important consideration given that much of the recent increase in income inequality derives from inequality in life-cycle earnings, and arguably a relatively progressive earnings tax structure is a reasonable policy response to that.

Given these competing arguments for and against capital income taxation, what are the policy alternatives? There is a strong case against comprehensive income as the ideal. Even if one wanted to tax capital income, there is no reason to tax it at the same rate as earnings. There are two reasonable alternatives. One is the so-called dual income tax, exemplified by the Nordic income tax initially adopted in Scandinavia that spread to other European countries.[9] Earnings would be taxed according to a progressive tax schedule, while capital income would be subject to a separate schedule, typically at a uniform rate (equal to the lowest earnings tax rate in the Nordic system). Uniform capital taxation simplifies the system by allowing for withholding by financial institutions and reducing wasteful tax planning. It also satisfies the argument for some capital income tax, albeit at different rates than earnings taxation, which can be as progressive as desired. The dual tax does not eliminate all complications. Some asset income cannot be taxed, and policymakers might want to positively encourage saving for retirement. There is still a need for the corporate tax to serve a withholding function, which might compromise its use as a rent-collecting instrument, and which as mentioned is difficult to do in an open economy in any case. Enforcement problems also arise in distinguishing earnings from capital income in unincorporated businesses. And, taxing capi-

9 The dual tax was also one of the options recommended by the President's Panel (2005).

tal income at a uniform and low rate means that much income from inherited wealth goes untaxed. For that, as well as for reasons of equality of opportunity, wealth transfer taxes are a complementary policy instrument to the dual income tax.

The second alternative is to adopt a form of personal expenditure taxation, along the lines of the Meade Report or the Mirrlees Review. In the Meade Report, assets would be treated in one of two forms: TEE (tax-prepaid) or EET (registered). Some assets whose returns are difficult to measure, like housing, would necessarily fall under TEE. Others, like personal business assets, human capital accumulation and possibly pensions, would naturally face EET. For others, taxpayers might be allowed to choose either TEE or EET so as to average their tax liabilities over the life-cycle. In such a system, if all returns to assets were normal, TEE and EET would give rise to equivalent tax bases in present-value terms. However, to the extent that asset income deviates from normal, the two will differ. Some assets might obtain windfall earnings, which are only captured under EET. Others might be risky so could earn either more or less than normal returns. In this case, EET would generally implicitly treat above-normal and below-normal returns symmetrically. The government would effectively share the risk, and thereby encourage risk-taking.

The Mirrlees Review adds a third treatment, TtE, which taxes in each year all returns in excess of the normal rate of return, or RRA. They specify that this will apply especially to equity assets, whose return is liable to include above or below-normal returns. TtE differs from EET in that all non-normal asset returns are cumulated and taxed when the asset is disposed of under EET, but are taxed as they accrue under TtE. As long as all losses are treated symmetrically with gains, TtE accomplishes much the same as EET, but averages tax liabilities over time and advances government revenues. The Mirrlees Review makes no other allowance for self-averaging by choice of asset treatment, presumably because the use of TtE makes income averaging less necessary. TtE treatment does, however, add considerable complexity to the system since it requires that both asset returns be reported and normal returns be measured each year.

Unincorporated business income could also be treated in one of two ways. The Meade report recommended cash-flow business taxation, or EET in Mirrlees' parlance. The Mirrlees Report proposes the ACE system mentioned above and discussed in more detail below. It is the analogue of the RRA that they propose for equity income at the personal level. Again, the difference is primarily in the timing of tax liabilities: The ACE advances taxes but does so at some administrative cost. What is critical in both cases, especially cash-flow business taxation, is that losses be treated symmetrically with gains, either through full refundability of tax losses or carry forward with (risk-free) interest. Refundability has a further advantage in relaxing financing constraints that young growing firms might face.

Among the three alternatives — dual income tax, Meade-style expenditure tax, or Mirrlees TEE-TtE-EET combination — the Meade system with TEE and EET alternatives seems preferable, provided it is accompanied with an inheritance tax. The inheritance tax largely undercuts the need for capital income taxation, and the Meade version of expenditure tax is less complex that the Mirrlees one, while accomplishing the same thing. If inheritance taxation is not feasible, the Nordic-style dual income tax would be a second-best choice. In all cases, it is reasonable to maintain TEE treatment for housing, especially given that housing draws property taxation, and EET for retirement savings.

All of the above alternatives require that the government choose a rate structure to apply to earnings.[10] By rate structure, we mean not only the system of tax brackets and exemptions, but also tax credits — refundable or not — that exist for redistributive purposes.[11] There is no unambiguously optimal rate structure, given the value judgments involved. However, a number of considerations influence how progressive the tax might be:

10 We use the term earnings, but transfers from government would typically be included with earnings in the non-capital-income tax base.

11 Some nonrefundable tax credits exist for other reasons, such as to reflect costs of earning income or to encourage certain types of behaviour (charitable and political contributions), or simply to adjust the base (medical expenses). For reasons of space, we do not deal with these, although they do raise issues of tax policy.

- First, the separation of the rate structure on earnings from capital taxation removes a constraint on progressivity, especially at the top end, as we have mentioned.
- Second, in the Canadian context, extra responsibility is placed on the federal rate structure to achieve national redistributive goals, given that the provincial rate structures are apparently bound to be less progressive.
- Third, progressivity is largely determined by what happens in the upper and lower ends. At the upper end, two factors are relevant. One is that adding a bracket near the top adds much less revenue than adding one lower down (since there are fewer persons to whom it will apply). The other is that the elasticity of the tax base is often estimated to be relatively high at the upper end.[12] This would presumably be reduced if only earning were included in the progressive tax base. *A priori*, the effect of higher taxes at the upper end can go either way. While there is a substitution effect tending to reduce earnings, an income effect should operate in the other direction. Given the fact that inequality in earnings has become so pronounced in recent years (OECD, 2008), a strong case on equity grounds could be made for adding an additional bracket at the top.
- It is at the lower end where real progress could be made. Given the acceptance and experience with refundable tax credits, there seems to be no reason not to make all credits refundable. This would turn the tax system into a proper negative income tax system and go a long way to redressing the shameful treatment of persons at the bottom of the income distribution who are not working. Indeed, the refundable tax credits could be made even more progressive by conditioning them on family income so that they vanish before middle income levels.
- The Mirrlees Review, following recent literature on optimal tax theory, emphasized reducing participation tax rates for taxpayers whose participation in the labour force was sensitive to after-tax income.[13] Three groups

12 The Department of Finance (2010) estimated the elasticity of taxable income in the top percentile of the income distribution in Canada to be about 0.62-0.72, compared with 0.2 in the top decile.

13 The participation tax rate is the additional tax incurred plus transfer forgone when an individual participates in the labour market.

were singled out: low-income workers, parents of children at minimum school age and older workers near retirement. For the first category, the Working Income Tax Benefit (WITB) is a suitable instrument, although as discussed below, care must be taken to ensure that those unable to work or find jobs are not put at a disadvantage as a result. For parents with children, refundable tax credits for children could be used. To achieve both redistribution and participation objectives, they could be conditioned not only on family income, but also on the age of the child and whether the parent is working or not. Thus, they would be most generous for working parents of children from three- to five-years old from low-income families. (Parents with younger children could also have tax assistance for daycare costs.) This would involve a major overhaul of the current Canadian Child Tax Benefit (CCTB), National Child Benefit Supplement (NCBS) and Universal Child Care Benefit (UCCB), which taken together are not well targeted. For those near normal retirement age, for whom participation in the labour force is quite elastic, revisions to public pensions could ensure that there is less financial incentive to retire.

- Finally, what is relevant for redistribution purposes is lifetime welfare rather than annual welfare. Given that the income tax system is based on annual income, this is problematic. One's income in any given year need not reflect one's lifetime income. To the extent that one uses consumption as the tax base, which EET treatment would approximate except for services of consumer durables, the problem is partly mitigated if household consumption reflects permanent income. However, this will not be true if there is uncertainty about future income. To mitigate the problem that current taxable income does not reflect lifetime income, a system of general income averaging is both feasible and suitable, and should be instituted. It will be especially important for those with volatile incomes, such as entrepreneurs for whom risk-taking is a characteristic. General income-averaging is not without its practical problems, such as how to deal with new entrants into the labour force or how to account for changes in the level of taxation and public services over time. Any form of general averaging will be imperfect, but it will be better than no averaging.

Income Tax Collection Agreements

One final area of concern regarding individual income tax policy involves income tax harmonization between federal and provincial governments. The current TCAs represent a reasonable balance of a common tax base and collection agency with some provincial discretion over their own rate structures. Any new system ought to make it attractive to maintain the TCAs, which obviously means attaining provincial consent. There are a few issues that are relevant here.

One is the importance of the federal government retaining a significant share of the income tax room. Given the tendency for the provinces to adopt less progressive rate structures, the progressivity of the federal income tax must be largely relied on to achieve the redistributive goals of the tax system. This can be done more easily the greater the tax room the federal government occupies.

A second issue is that decentralization of income tax room to the provinces has implications for the integrity and sustainability of the equalization system. The more decentralization there is, the more horizontal fiscal disparities there will be: given that provinces have varying sizes of tax bases, the more they rely on own revenue, the greater will be differences in tax rates across provinces to finance given levels of public services. This will make satisfying the equalization commitment more difficult financially for the federal government, and perhaps also more difficult politically.

Last, the integrity of the TCAs is more likely to be maintained the greater is the share of the income tax room occupied by the federal government. The TCAs were initially conceived in the early post-war period when the federal government was the sole occupant of the income tax system. As tax room devolved more and more to the provinces, pressures for disharmonization increased. Provinces naturally wanted more discretion to set their own income tax policies, and initially pursued that by deploying an increasing number of provincial tax credits, deductions and rebates. Eventually, the TCAs were reformed so that the provinces could choose their own rate structures and tax credits within limits. The system has now devolved about as much as it can without jeopardizing harmonization.

Business Income Tax

The current business income tax for both corporations and unincorporated businesses is predicated on the idea that the corporate tax should be a tax on corporate equity income. The rationale for this is based on the presumption that the personal tax should be on comprehensive income. In this context, the corporate tax serves a necessary withholding role to preclude shareholders from postponing taxation on their equity income by retaining it within the corporation. Given this rationale, a system of integration is needed to give credit for corporate taxes paid when the equity income is eventually taken out of the corporation. As well, interest deductibility is justified by the fact that no withholding against interest is necessary: individuals can be taxed on interest income as it accrues.

The design of the corporate tax to fulfill this rationale has always been very imperfect. As various calculations have shown (e.g., Boadway, Bruce and Mintz, 1987; Technical Committee on Business Taxation (The Mintz Report), 1998), the marginal effective tax rate — which is a measure of the distortion imposed on investment decisions — has generally been non-zero, and has varied considerably over industries and types of asset. Natural resource industries, and to a lesser extent manufacturing, have been heavily favoured, while service and tertiary industries have suffered discrimination. Indeed, investment in some non-renewable natural resources has actually been subsidized at the margin, owing to the excessively generous mix of deductions. The interest-deductibility provisions also have deleterious effects. They encourage debt finance, which as the recent deep recession shows, can be counter-productive. As well, interest deductibility is a main element of the tax system that firms can use to shift profits from one jurisdiction to another to minimize their tax burden.

These problems can be largely avoided by re-designing business taxation to be a tax on rents. If the personal tax is based on expenditures, in either the Meade Report or Mirrlees Review senses, there is obviously no need to use the corporate tax for withholding against domestic shareholders: the dividend tax credit can be eliminated. Even with a dual tax, withholding loses much of its rationale, especially in an open economy like Canada. At the same time, the case for a tax on rents generated in the business sector is strong. Rent taxes are

an efficient source of revenues. Moreover, in the natural resource sector, they are, along with auctions for the right to exploit natural resources, ways for the government to obtain a share of the fruits of the nation's endowed wealth.

Designing a rent tax is also much simpler than designing a tax on business equity income. The simplest version is the cash-flow tax recommended by the Meade Report where the tax base is simply the revenues of the firm less its cash expenditures. There is no need for accrual accounting, for indexing, for interest deductibility or for depreciation. Nor is integration with the personal tax needed. The main problems are three-fold. First, one must decide how to treat financial services, that is, whether to tax them on a cash-flow basis as well.

Second, there may be some enforcement problems with implementing a cash-flow tax. Since taxes are implemented by self-reporting, the tax authority would have to rely on the cash flow as reported by firms. Firms might have an incentive to overstate their costs, for example, by exaggerating the cost of inputs from their operations abroad. As well, self-operated firms might have an incentive to convert labour costs into profits to reduce their tax burden.

The first two problems are ones that may prevent the tax from being perfect, but are not significant enough to preclude using a cash-flow tax. The third problem is that cash flow taxation typically leads to negative cash flows when firms are investing and positive ones later on. For full neutrality, negative cash flows need to be treated symmetrically with positive ones. Refundability is one way of doing that. It is an attractive way from the point of view of assisting with the financing problems firms might have, but conceivably refundability could lead to fraudulent behaviour. The alternative is to allow firms to carry forward their losses at a risk-free interest rate — risk-free, assuming that there is no risk that the government will not honour them, even if the firm goes bankrupt. However, admitting the possibility of carrying forward tax credits opens up the possibility of a wide variety of cash-flow equivalent efficient business tax systems.

A particular case of this is the ACE system, whereby a firm effectively is allowed to deduct financing costs from the full value of the firm's accounting capital stock. More specifically, when a firm invests, it adds the amount of investment to its accounting capital stock, and claims two deductions. One is the risk-free nominal interest rate applied to its entire accounting capital

stock, no matter how it was financed. The other is a depreciation rate based on its accounting capital stock, which then reduces its book capital. Regardless of the rate of depreciation chosen, this is a neutral tax. The tax is implemented on a cash basis: neither accrual accounting nor indexation is required. The only important additional information needed over and above a cash-flow tax is the risk-free interest rate.[14]

The ACE system is the preferred tax system under our alternative personal tax bases, and it avoids special treatment of small relative to large corporations that are alleged to cause anti-growth biases (Chen and Mintz, 2011). It is worth reiterating that efficiency of the business tax is only preserved if all negative tax liabilities are either carried forward with interest or refunded. Refunding must apply to projects that do not succeed and go bankrupt. This is especially important for the resource industries where the success rate in exploration can be very low.

One final issue concerns the corporate tax rate. The proposed cash-flow-equivalent tax would be a tax levied at source, rather than destination. Traditional source-based corporate taxes are prone to tax competition: lower tax rates attract capital, but they also induce profit-shifting. However, corporate taxes based on rent are not subject to the same competitive pressures as those based on equity income. A properly defined tax on rent should, in principle, have little effect on investment decisions and therefore on location. At the same time, the absence of interest-deductibility removes one major vehicle for profit shifting. That is not to say that profit-shifting cannot still occur through transfer pricing, but at least it will be mitigated. This resistance to tax competition is an important feature of a rent tax, especially in the Canadian context where the corporate tax is one instrument the federal government has to get a share of natural resource rents, to which we turn next.

Special Case of Natural Resources

14 The ACE tax is a special case of the general neutral tax proposed by Boadway and Bruce (1984). They showed that neutrality is achieved whatever the depreciation rate used, provided the interest cost is based on the resulting book value of capital. Bond and Devereux (1995) showed that the neutrality property is preserved when the firm faces uncertainty, provided all accumulated tax credits are available when firms go bankrupt.

The tax treatment of the natural resource industries is obviously particularly important and contentious for Canada. It is important since natural resources are a substantial potential source of revenues, and these can be interpreted as the public's claims to the fruits of its endowed resources. It is contentious because the provinces have an ownership right to natural resources. As well, in the case of non-renewable resources, the stock will run out in finite time, and an issue is how the benefits should be shared with future generations.

The tax treatment of natural resources is complicated by a number of factors. There is more than one policy instrument used to obtain revenues. Rights to explore and develop resources are sold, often by auction. In principle, these should generate close to 100 per cent of expected future rents if a competitive auction is used. However, this will be compromised to the extent that there are other revenue instruments used downstream, that there is political risk about future tax policies, and that the rights acquired are limited in time or by stage of production. Provinces also deploy dedicated resource taxes, such as royalties or mining taxes. And, resource industries are subject to general business taxes by both the federal and provincial governments. Resource production is a very lengthy process involving many stages of production and possibly many different firms at various stages. As well, there is a high degree of uncertainty, both about the outcome of exploration and, given the volatility of natural resource prices, about future revenues. There are also environmental issues involved both during production and with the shutting down of resource operations. We cannot do justice to these issues here. We focus mainly on the application of general business taxes to natural resource industries.[15]

The rent-collecting motive is paramount in resource taxation, which makes cash-flow taxation or its equivalent, such as ACE taxation, ideal. Thus, natural resources should face the same corporate tax system as other industries. The use of cash-flow-equivalent taxation implies that all costs incurred at all stages of production should be expensed or carried forward at a risk-free interest rate. There should be no additional deductions for depletion or interest, and

15 A more general treatment of natural resource tax policies may be found in Boadway and Keen (2010).

no special mining allowance. Nor should there be a deduction for provincial resource taxes against the corporate tax. That simply transfers revenue from the federal government to resource-owning provinces, as well as creating a distortion in incentives.

Since what is being taxed is rent, there is no natural limit to the rate of tax that should apply: natural resources are not mobile. In a sense, the higher the tax rate the better, since this is both an efficient source of government revenues and a particularly important source of revenues for the federal government given its obligation to equalize provincial revenue capacities.

There are, however, some design features of cash-flow taxation that are especially relevant for natural resources. Loss-offsetting is particularly important given the risk associated with the industry. Loss-offsetting should apply at all stages of production, including at the exploration stage. A proper measure of rent allows a deduction for all expenditures beginning with initial exploration. Also important, but even more difficult for policy-makers to abide by, is to avoid changing tax rates when circumstances change. If firms anticipate this, and there is no reason why they should not, their investment decisions will take it into account and will be distorted as a result. Being able to commit to tax rates is obviously difficult for governments. It is one reason why advancing tax liabilities earlier in the firm's production cycle is important.

The multi-stage nature of production also leads to potential problems when different firms are involved at different stages. The cash-flow tax system should see through changes in ownership, and ensure that cash-flow taxation is applied over the entire life cycle of natural resource property acquisition, development and shutdown. Taxing natural resources on a cash-flow basis is more difficult when other industries do not face the same tax because it is necessary to distinguish resource cash-flows from those of other activities. However, if, as we propose, all industries are subject to cash flow taxation, this problem is avoided.

Special issues arise with respect to the provincial right to tax natural resources. Naturally, the same principles of rent tax design ought to apply to the provincial resource tax regimes. In addition, there are some other important issues. The ideal division of tax room between the federal government and the provinces is by no means clear. On the one hand, the provinces can claim

some right to ownership and the property rights that entails. On the other hand, the federal government has the right to levy corporate income taxation on all producers, including natural resource firms, and has done so for many years. It is particularly important that the federal government have some access to resource revenues, given its constitutional commitment to equalization. The greater the share of natural resource revenues collected by the provinces, the greater fiscal disparities will be, and the more difficult it will be for the federal government to fulfill its equalization obligations.

Provincial access to resource revenues has some other potentially damaging effects on the Canadian economy. To the extent that resource rents are not saved, future generations are deprived of a share of the benefits and the economy is more prone to the Dutch disease.[16] If the revenues were saved in a heritage fund held in foreign assets, as in the Norwegian case, exchange-rate appreciation would be restrained, and the damage done to non-resource sectors mitigated. Seemingly, provinces do not have the inclination to set aside natural resource revenues for future use, despite in the case of Alberta the existence of a Heritage Fund whose intent was precisely that.

One reason for that is the temptation that exists for resource-rich provinces to spend their revenues on province-building infrastructure. This is a form of fiscal competition that is likely to be inefficient from a national perspective. There is no particular reason on economic geography grounds for industrial development to be located where natural resource endowments happen to be largest.

For all these reasons, a strong case can be made for the federal government obtaining a reasonable share of natural resource revenues through a rent-based corporate income tax that applies to all industries.

16 The Dutch disease, or resource curse, refers to the adverse effects that natural resource production can have on the growth of an economy by attracting resources out of more innovative sectors, by damaging export-oriented sectors as a result of exchange rate appreciation if the proceeds of natural resource production are spent rather than saved in foreign assets, and by perhaps encouraging poor governance by making resource revenues too readily available for spending or wasting.

Sales Taxation

General sales taxation can potentially fulfill three purposes: raising revenue, providing a vehicle for decentralizing own-source revenues to the provinces, and supplementing the income tax as a redistributive instrument. In fact, the latter two roles invite difficulty.

Consider first the decentralization of sales taxation room to the provinces. It is hardly arguable that the ideal form of sales tax is a value-added tax (VAT), of which the GST is an example. By eliminating taxes on producer inputs, the GST achieves production efficiency and also evens the playing field between domestic and foreign producers. This makes it a relatively efficient tax, certainly more efficient that single-stage sales tax alternatives. The main detraction from efficiency is probably the evasion that the GST draws, partly because of the taxpayer resentment fueled by the fact that the federal government chose to levy it in a highly visible way.

Decentralizing the GST to the provinces, even in a relatively harmonized way, faces difficulties. For decentralization to be meaningful, provinces would have to be able to exercise discretion at least with respect to the provincial tax rate. However, running a VAT in a federal system in which different provinces charge different tax rates gives rise to both complexity and opportunity for evasion. The evasion opportunities mainly arise from the absence of border controls combined with destination-based taxation. This leads to input tax credit payments at the border, which invites the kind of schemes that have caused difficulty in the European Union (summarized fully by Crawford, Keen and Smith, 2010). This can be mitigated by having a single tax authority as in Canada, but the difference in tax rates across provincial borders adds complexity nonetheless for firms that buy and sell in more than one provinces. In principle, this problem can be further minimized by differential provincial tax rates applying only at the final, consumption, stage, while having a common rate of tax on inter-firm transactions, but this too is complicated.

An important point is that not much is gained by allowing provinces to choose their own sales tax rates within a harmonized sales tax system. The argument is that discretion to set tax rates improves accountability. However, that argument is over-stated. Provinces infrequently change their sales tax rates as it is: they simply take whatever revenue is exogenously raised from the

given tax rate. Little is lost by not having the discretion to change rates. Given that, the original HST system, whereby the participating provinces abide by both the federal GST base and the rate structure, is by far the best approach.

The choice of the structure of the GST raises the redistribution issue. Should some necessities be given preferential rates, including either exempt or zero-rated status? The Mirrlees Review argued that the VAT should be uniform with no exceptions, even for things like food and children's clothing. Their argument relied on established, but somewhat technical, optimal tax theory findings which said that if the income tax is chosen optimally, preferential commodity taxes are only helpful to the extent that they apply on goods that are the most complementary with leisure (and these need not be necessity goods). Unless particular goods are complementary with leisure, which their empirical estimations indicated was not the case for necessity goods, redistribution can be more efficiently carried out through the progressive earnings tax system, including refundable tax credits. Put differently, it is better to eliminate preferential treatment of particular goods and replace it with adjustments to the income tax and refundable tax credit systems so that low-income persons are no worse off.[17]

This argument is not entirely convincing for a couple of reasons. One is that there may be constraints on the progressivity of the income tax because of the possibility of evasion or changing earnings into capital income, or because the federal share of the income tax is unduly restricted. In this case, some progressivity can be achieved that could not be possible under the income tax alone. As well, redistribution involves persons who are not in the labour force for whom complementarity with leisure is not an issue. For these reasons, it may be reasonable to maintain preferential treatment of some goods that are heavily relied on by low-income persons, despite the fact that this adds some complexity to the system. It is important, however, that the exemptions apply to goods that are disproportionately consumed by low-income persons.

Given these principles, the ideal system would be one in which all provinces participate in the HST (although Quebec is a special case because of its par-

17 The Mirrlees Review argued that there should be an exception for financial services and housing, but that was not on redistributive grounds.

tially harmonized QST and agreement with the federal government to collect both GST and QST revenues), with a uniform base and rate structure and a single tax-collecting authority. The tax mix could be changed in favour of the HST relative to the current system, provided the federal government retains enough income tax room to achieve its redistributive objectives. Under a full-fledged HST system, the revenues could even be equalized before being turned over to the provinces, as in the Australian case, rather than being equalized after the fact. *Ex ante* equalization can be used to ensure that the high-fiscal-capacity provinces are equalized down, unlike in the current system.

The Equality-of-Opportunity Agenda

Most redistributive tax-transfer policy is motivated by the social welfare principle of equalizing outcomes, subject to efficiency costs of both taxes and transfers. However, equality of opportunity is a complementary objective, and one that is stressed in the Constitution Act, Section 36(1). The meaning of equality of opportunity is not clear. A weak notion is that all persons should have equal opportunity to succeed, given their skills. A stronger notion is that society should invest more in persons with lower skills in order to equalize skills. We focus on what kinds of policies would be appropriate for the weak notion of equality of opportunity, that is, for ensuring that persons are able to make the best of their given skills and not be at a disadvantage because of, say, socio-economic background.

There are a number of tax-transfer policy instruments that can serve an equality-of-opportunity objective. One is the inheritance tax. The Mirrlees Review recommendation for a lifetime tax on inheritances was explicitly motivated on equality-of-opportunity grounds. The idea is that persons who receive inheritances are placed at an advantage in life through no effort of their own. The inheritance tax is a natural complement to a tax system that treats capital income preferentially. Ideally, it would be a component of the Canadian tax system.

Another set of policies concern transfers for children. Targeted tax credits for children in low-income families serve to finance some minimal level of needs of such children. On these grounds, a system of refundable tax credits that are contingent on family income, are sizable, and fall off quickly with fam-

ily income would be helpful. This motivation for refundable child tax credits is different from that behind deductions or credits for child care, which are essentially intended to facilitate participation by parents in the labour market. (Tax credits that also target stay-at-home parents with children seem much less justified.)

Related to both inheritances and child tax credits is an imaginative idea that originated in the United Kingdom. Not too long ago, the United Kingdom government implemented a Child Trust Fund, which was a lump-sum payment, or birth bond, to all newborns, with the accumulated value of the fund being accessible after age 18. The idea was to make available to all children some startup funding for any purpose, such as education, when they finish school. The payment could have been targeted according to, say, family income, but the government chose not to do so. The Child Trust Fund was unfortunately abolished recently by the U.K. government as part of their austerity program. The idea of a birth bond was partly emulated in Canada with the Canadian Learning Bond. This is an initial $500 contribution by the government into an RESP for children whose parents qualify for the National Child Benefit Supplement to the Canada Child Tax Benefit, augmented by $100 per year up to a maximum federal contribution of $2,000. This is a well-targeted equality-of-opportunity measure that could readily be enhanced.

Perhaps the most important equality-of-opportunity policy is education at all levels. This takes the form of public schooling at the elementary and secondary levels. Tax-transfer policy becomes relevant at the post-secondary level. There are two main dimensions to the tax treatment of post-secondary education (PSE).

An income tax system that shelters asset income from tax should also shelter investment in human capital. The simplest way to do that is by the EET method: full deduction for all material costs of PSE (and other forms of human capital investment) as well as the implicit deduction of foregone earnings.[18]

18 Our discussion assumes that spending on PSE is an investment whose returns take the form of higher future earnings. It might be argued that part of the benefit of education is pure consumption, in which case it should be subject to a consumption tax (GST). Further, education is highly subsidized, so tuition does not cover the full costs. This further justifies the progressive taxation of earnings.

For this to be efficient sheltering, several features are important. The first is that, since the costs of education are incurred upfront and the benefits only apply later, full loss-offsetting is required. Ideally, this would take the form of refundability of financial costs, but otherwise carry-forward with interest would be next best. Second, since tax rates applicable on forgone earnings are less than those on future increments of income, income-averaging is important. Third, some of the costs of PSE are borne by parents, while the child reaps the benefit. This poses tricky issues for EET treatment. There could be some justification for allowing parents to deduct the financial costs of their child's education, with the returns fully taxed later on in the child's hands. This would be better than the current RESP system, which allows no deduction of savings, but taxes returns from the RESP, which are then used to finance PSE without a deduction. It is hard to justify such a system under either a personal expenditure tax system or a dual tax system. As mentioned, perhaps one rationale for an RESP-type instrument is a behavioural one: to encourage saving for PSE that would not otherwise be done.

Finally, there are imperfections in the financing of PSE. Many prospective students face liquidity constraints that restrict their ability to borrow for PSE, especially those from low-income families. As well, PSE is a highly risky investment for which insurance is not available. To some extent, the taxation of future returns provides implicit insurance: the government shares in the gains and the losses. But, some uninsured component remains. The riskiness of PSE investment combined with the fact of liquidity constraints can be addressed by a fully funded income-contingent loan system. It would take us too far afield to discuss the details of such schemes, especially in the context of Canadian federalism.[19] The general argument for income-contingent loans as the preferred form of student loans is strong.

Income-contingent loans go partway to addressing equality-of-opportunity objectives by relaxing the financing constraint that students from lower-income families face. But it does not overcome the fact that some students are able to take advantage of the fact that parental income is a significant source of

19 A more detailed discussion can be found in Beach, Boadway and McInnis (2005).

support for PSE. Students from the least advantaged families face a double disadvantage in terms of background preparation for PSE and of being able to finance it once they are accepted. For able and motivated students from disadvantaged family backgrounds, equal opportunity to pursue their capabilities requires financial aid. The recently introduced Canada Student Grant Program is well designed and well targeted on the basis of family income, but it is really quite inadequate in generosity, and covers only a portion of tuition fees (a maximum of $2,000 per year for students from the lowest-income families). While it is supplemented by other grants from the provinces and the universities, the amounts are not really adequate for those least able to afford PSE. Tax preferences are much less well targeted and comprise an increasing proportion of financial assistance: in the past ten years, government spending on tax credits and savings grants has climbed from 20 per cent of needs-based grants and loans to over 60 percent! Education and tuition tax credits are available to all households regardless of means, but because they are not refundable, their value to the lowest-income families is highly compromised.

Social Protection

Social protection policies are those that protect the most vulnerable in society, including the disabled, the injured and ill, the long-term unemployed, low-income elderly and single-parent families, and those on short-term involuntary unemployment for whom self-insurance is most difficult or for whom finding a job is a challenge. Many social protection programs exist, some of which involve the income tax system, and some of which are delivered by the provinces. By definition, these are needs-related and should be targeted as such. The current system does a relatively poor job both of targeting assistance to those who need it most and of providing adequate levels of assistance. Moreover, the levels of support for many categories of poor have deteriorated significantly in the past two decades (National Welfare Council, 2010).

Some target groups have fared better than others. Low-income seniors and families with children have been served relatively well, while the disabled and long-term unemployed have done poorly. The temporarily unemployed who are eligible for EI receive reasonable benefits, but a significant number of persons who become involuntarily unemployed are not eligible, especially new or

repeat entrants into the labour force, or they run out of benefits if they face structural unemployment. They enter the pool of long-run unemployed alongside those who have never held a job. The long-term unemployed and the disabled receive extremely low support, well below conventional poverty lines.

At the risk of over-simplification, two sources of these problems can be singled out (Boadway and Cuff, 2011). One is that those programs that are federal responsibilities (pensions, children, EI) seem to have offered better social protection than provincial ones (disability, social assistance). This may be because of the greater competitive pressures that provinces face, though it may also reflect that fact that policies for addressing the needs of the disabled and the long-term unemployed are more challenging. The relevance of competitive pressures affecting provincial redistribution is supported by the fact that provincial income taxes have become systematically less progressive than the federal one since the TCAs were revised to allow provinces discretion in the choice of rate structures. The second source of these problems is that transfers to low-income persons come mainly from stand-alone transfer schemes. The income tax system delivers only a small amount through refundable tax credits. As a result the contribution of the federal government to eliminating poverty is minimal.

The income tax system could be a much more important redistribution device through straightforward reform. Nonrefundable tax credits whose intent is to add to the progressivity of the income tax, such as personal credits and credits for dependents, could be made refundable. Moreover, they could be made much more progressive by phasing them out with income, as is done with the GST credit. This would be an effective way at targeting transfers to the needy, and could be done in a revenue-neutral way. It would effectively turn the income tax system into a sort of negative income tax system with progressive rates at the bottom, thereby addressing perhaps the most intolerable aspect of Canada's social policy program.

Conclusions

This has been a far-reaching discussion covering broad aspects of the tax-transfer system. But, the main features of our preferred tax design for Canada can be succinctly summarized as follows.

- The business tax system should be reformed to be a rent tax applying to all industries, using a cash-flow equivalent approach such as the ACE system.
- Ideally, earnings should be taxed on a progressive expenditure tax basis, using a combination of TEE and EET approaches, accompanied by a lifetime tax on inheritances beyond some minimum. A second-best option, if inheritance taxes are too difficult to implement in the Canadian context, would be a dual income tax structure, with a uniform personal tax on capital income at a low rate.
- Progressivity should be enhanced by a combination of fully refundable and income-tested tax credits, and a more progressive rate structure, accompanied by general averaging.
- A uniform personal tax on capital income at a low rate accompanied by a lifetime tax on inheritances beyond some minimum should ideally be deployed.
- For both equality-of-opportunity and productivity reasons, the tax treatment of human capital investment should be rationalized by a combination of EET treatment for both forgone earnings and financial costs, an income-contingent loan system, and highly targeted and adequate student grants for students from low-income families.
- The federal government should retain a significant share of income tax room to maintain influence on progressivity and harmonization.
- The HST should be adopted by all provinces except Quebec, preferably with a common base and common rate, though some necessities should be treated preferentially.

The full details of such a reform would have to be worked out, but it is important to get the principles in place first. Other elements of the fiscal system that we have not been able to discuss would also have to be addressed, such as equalization and social transfers, EI and pensions. What is particularly important is that the tax-transfer system be highly targeted to those most in need, and that the system be as efficient as possible.

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