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EDUCATION PAPER

Tax Preferences for Education Saving:

Are RESPs Effective?

Kevin Milligan

In this issue...
Though popular, registered education savings plans and the related Canadian education savings grants are a needless, complex and ill-targeted way of supporting postsecondary education. More general tax relief of saving and redeployment of grant money would be simpler and could better improve access to postsecondary education for lower-income families.

The Study in Brief

Since 1998, the government of Canada has substantially expanded its support for registered education savings plans (RESPs) as a means of subsidizing savings for young people's education. This *Commentary* examines RESPs both analytically and statistically to gauge their effectiveness; it finds several flaws in the program.

The primary economic effect of RESPs is to add needless complexity to Canada's tax system. Through registered retirement savings plans (RRSPs) and other forms of tax-advantaged savings, Canadians already have access to tax-exempt accrual of income. The addition of extra contribution room through the RESPs may attract savings that were destined for another tax-advantaged form, but is unlikely to generate new household saving. Even if RESPs encourage households to save through a "lockbox" effect, or through learning about the importance of saving, other government measures could activate these mechanisms more effectively than the RESP.

Furthermore, the $423 million the government expects to spend this year on Canada education savings grants (CESGs) — the federal matching grants that accompany RESP contributions — is a poorly targeted use of public money. The CESG payments end up disproportionately in high-income households. These payments do nothing to improve access to post-secondary education for Canadians from disadvantaged backgrounds. Families with children may deserve a tax break, but the narrowly targeted CESG is the wrong way to do it.

The *Commentary* recommends reallocating the funds now spent on CESGs into uses targeted more directly to deserving postsecondary students and rolling the RESP program into general tax-preferred savings accounts. These two measures would improve access to post-secondary education for disadvantaged Canadians and increase the efficiency of Canada's tax system.

The Author of This Issue

Kevin Milligan is Assistant Professor of Economics at the University of British Columbia.

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Registered education savings plans (RESPs) are increasingly popular savings vehicles for Canadian families. A tax measure that encourages more saving and education, while giving tax breaks to parents with children may seem a worthy endeavour. However, an examination of RESPs raises serious doubts about the program's effectiveness in achieving these goals in the most cost-efficient way.

Governments intervene in the market for postsecondary education in many ways. Among them is the subsidization of households' saving for future education expenses. Since 1998, the government of Canada has expanded substantially its support for RESPs as a way to subsidize education saving. In this paper, I examine this policy intervention both analytically and statistically to gauge its effectiveness.

At least three well-known economic arguments support a role for government in the market for postsecondary education. For one thing, poor individuals may find it difficult to borrow against their future labour market earnings because of problems accessing credit. In this argument, individuals and families are willing to pay for the right amount of education — even when it is priced to recover the full cost — but are thwarted by their inability to borrow.[1]

In contrast, a second argument is that the market price of education is too high without government intervention. Modern theories of economic growth emphasize the importance of education spillovers in improving long-term economic growth. Evidence exists that having more postsecondary graduates increases the earnings not only of the graduates but also of others.[2] One person's additional learning affects the productivity and output of everyone in the society. The implication is that education should be subsidized to account for the spillovers that benefit other citizens. Scholars often argue that education, in addition to any purely economic benefits, produces better citizens, bringing social benefits by facilitating better decisionmaking by the electorate (for an expansion of this theory, see, for example, Friedman 1962). Another important factor is future taxation of higher earnings resulting from higher education, which, Collins and Davis (2002) argue, could dissuade individuals from pursuing higher education. All this reasoning suggests that the price of education should be subsidized.

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1 Dynarski (2002) shows that financial aid has a large impact on college attendance in the United States. This finding may be evidence that some households have difficulty borrowing. Carneiro and Heckman (2002), however, find that relatively few US households find it hard to borrow to go to college. Finnie (2001) presents descriptive evidence on student loans in Canada.

2 Moretti (2002), looking at different cities across years, finds that the wages of all workers increase when the supply of college graduates in the United States rises. For a one percentage point increase in the number of college graduates in a city, the earnings of high school dropouts go up by 1.9 percent, the earnings of high school graduates grow by 1.6 percent, and the earnings of college graduates rise by 0.4 percent. In contrast, Acemoglu and Angrist (2000) find that increases in high school education have no significant social effect.

A final argument for government intervention arises from concern for equity. Subsidies to postsecondary education provide a type of in-kind redistribution by giving opportunities to obtain education to those who otherwise would not obtain it. This redistribution brings social benefits by apportioning more fairly opportunities to enjoy high lifetime earnings and thereby produces a more fair spread of lifetime income.

RESPs do not, of course, change the price of education. (They may change the size of a household's budget, but they do nothing to change the sticker price of education relative to that of other household expenses.) They can, however, assist in education-acquisition decisions by increasing the amount of saving for postsecondary education. If RESPs increase household saving, then families need less borrowing to finance postsecondary education. Less borrowing means a decrease in the need to access credit, a point that relates directly to the credit market access argument for government intervention. I judge RESPs on their effectiveness in improving education decisions through this channel.

In the analysis that follows, I find that RESPs do not add useful tax-preferred contribution room for most households.[3] Through registered retirement savings plans (RRSPs) and other types of saving, most households already have access to tax-exempt income accrual without using RESPs. Furthermore, I find that the Canada education savings grants (CESGs) paid as matching funds to RESP contributions are a costly, poorly targeted, and questionable use of public money. I conclude with recommendations to merge RESPs into a program of general tax-preferred savings accounts and to reallocate the funds spent on CESGs to measures better suited to increasing efficiency and equity in postsecondary education.

Institutional Background

RESPs must be studied in the broader context of the tax treatment of saving in Canada. For this reason, I begin with a brief overview of the treatment of RRSPs and follow with a thorough description of the tax treatment of RESPs.

Registered Retirement Savings Plans

Canadian taxpayers can make deductible contributions to RRSPs of as much as 18 percent of earned income, to a limit of $13,500. A pension adjustment for taxpayers in workplace-based registered pension plans (RRPs) reduces the limit. Income earned on these contributions accrues free from tax. Withdrawals of the original contributions and the cumulative investment earnings are added to taxable income in the year of withdrawal. At age 69, the taxpayer must roll the RRSP into registered retirement income funds (RRIFs), from which he must make a scheduled series of withdrawals.

3 In this paper I refer to the tax treatment of RESPs and similar savings vehicles as tax-preferred. This vocabulary choice reflects the reality that the statutory base of Canada's income tax system is annual income. Exemptions of income from this base can reasonably be labeled preferences. If consumption or lifetime income were the base for taxation, exemptions of capital income would no longer be preferences.

RRSPs can easily be used for savings of any type, not just for retirement. In this sense, they are retirement savings plans in name only. Withdrawals can be made at any time before retirement with no penalty. Only the forced annuitization through RRIFs relates directly to retirement. For this reason, we should think of RRSPs as a general vehicle for the tax-exempt accrual of savings, rather than as pensions. This distinction is important in considering how RRSPs interact with RESPs in the analysis that follows.

Registered Education Savings Plans

The government of Canada introduced RESPs in 1974 and substantially revised them in 1997 and 1998. However, their popularity has increased dramatically since the reforms. This section describes the taxation of funds in RESPs according to current legislation drawing from the greater detail available in Canada (2002a) and from Donnelly, Welch, and Young (1999).

The RESP Rules

A Canadian taxpayer (officially referred to as "the subscriber") can open an RESP account in the name of a beneficiary as a trust agreement at a financial institution. The beneficiary does not have to be related to the subscriber. No global age restrictions circumscribe the choice of beneficiary, but an RESP must be closed out 26 years after the subscriber opens it.

Contributions are limited not for the subscriber but on the side of the beneficiary. The total contributions across all RESPs in a beneficiary's name cannot exceed $4,000 in a year or $42,000 over her lifetime. No carryforward provision exists, so annual contribution limits are available on a "use it or lose it" basis. Ottawa levies a tax of 1 percent per month on contributions in excess of the annual or lifetime limits. Unlike funds within an RRSP, those within an RESP face no foreign investment restrictions.

Since 1998, contributions to RESPs have attracted a matching grant from the federal government. It pays into a benficiary's RESP — a CESG of 20 cents for every dollar of contribution. The maximum CESG in a given year is $400, so the 20 percent match is, in effect, for the first $2,000 of contributions. Beneficiaries under age 18 are eligible for the CESG. If the contribution in any year is less than $2,000, the unused CESG room can be carried forward for use in future years.[4]

CESGs are forfeited if the beneficiary does not pursue postsecondary education. However, a family plan may be set up for multiple beneficiaries under age 21 who have a blood or adoptive relationship with the subscriber. Under such a plan, payouts are not directly tied to an individual child; rather, RESP

4 For example, if the subscriber contributes $1,000 to an RESP in year 1, the CESG for that year is $200. In year 2, an RESP contribution of $3,000 attracts a CESG of $600, $200 of which is paid on the basis of the $1,000 of unused CESG room from the previous year. The CESG in any one year is capped at $800. CESG contribution room accumulates from birth, whether or not the child is the beneficiary of an RESP from birth.

contributions and CESG payments go into a single pot without child-specific earmarking. Thus, CESG payments and accumulated earnings are neither forfeited nor subject to special taxes if one child does not pursue postsecondary education. Instead, another beneficiary of the family plan can use these funds without penalty.

The tax treatment of RESPs differs from that given RRSPs. Subscribers cannot deduct RESP contributions from taxable income — contributions must come from after-tax income. Within the RESP account, a legal distinction is drawn between the original contributions and the income earned on those contributions. The original contributions may be withdrawn at any time without tax consequences for the beneficiary or the subscriber. (This rule makes sense because these funds were taxed as the income of the subscriber before they were contributed.) Income earned on the original contributions is exempt from tax as it accrues within the RESP.

CESGs are not taxed as they enter the RESP account. When funds are distributed from the plan to the beneficiary, CESGs are considered as part of the accumulated income of the RESP, meaning that they count as taxable income at that point.

Distributions of the accumulated income in the RESP can be made in one of two ways. First, the beneficiary can receive an educational assistance payment (EAP) if he is enrolled in a qualifying postsecondary program on a full-time basis (or part-time if mental or physical impairment precludes full-time study). The EAP is included in the beneficiary's taxable income in the year the payment is made. Relative to the treatment of other types of tax-preferred savings accounts, this taxation of EAPs appears severe.[5] However, the possibility of double taxation is mitigated by the fact that students are unlikely to have much income subject to taxation.[6] These payments, therefore, are not (or only lightly) taxed at withdrawal. No more than $5,000 can be distributed as an EAP within the first 13 weeks of entry into a qualifying program, presumably to prevent beneficiaries from dropping out of school immediately after cashing out their RESPs.

Relative to the treatment of other types of tax-preferred savings accounts, the taxation of EAPs appears severe.

The second channel for distribution of the accumulated income is an accumulated income payment (AIP).[7] These payments distribute the accumulated income in an RESP back to the subscriber if the beneficiary has died or has reached 21 years of age and is not enrolled in a qualifying postsecondary program. Other conditions are that the RESP has been in existence for 10 years and the recipient of the AIP is a permanent resident of Canada. If the subscriber has died, another recipient for the payment may be named. The subscriber must include these payments in taxable income; in addition, they are also subject to a surtax of 20 percent (12 percent in Quebec). If the subscriber has available RRSP contribution

5 I assess this tax treatment as severe because accrued income is taxed. In contrast, RRSPs or tax-prepaid savings plans do not tax accrued income. See Kesselman and Poschmann (2001) for a detailed analysis of the economics of tax-preferred saving.

6 A typical student has the following credits: education tax credit, $400 per month or $3,200 per year; tuition credit, $3,500; and basic personal amount, $7,412. They total $14,112 per year. Income at this level or lower escapes taxation. The education and tuition credits can be transferred to parents or carried forward for future use by the student. Extra taxable income, therefore, decreases the value of these credits to the parents or to the student's future tax returns.

7 Before 1998, the EAP was the only channel. If the beneficiary did not attend a qualifying postsecondary program, all accumulated funds in the RESP were forfeited, and only the original contributed principal returned to the subscriber.

Box1: United States and the United Kingdom

The United States and the United Kingdom offer resident taxpayers several avenues for tax-preferred saving. Because of the legal and historical connections between these countries and Canada, they supply policy examples relevant to the Canadian case.

The United States

The United States subsidizes education saving through many tax measures (for a review, see Hoxby 1998). Tax-preferred saving for education in the United States can be made through Coverdell education savings accounts (which were called Education IRAs before 2001). Coverdell Education Savings Accounts are very similar to RESPs. Contributions to them are not tax-deductible, but income earned on contributions accrues without tax. Withdrawals are not subject to any taxation if they are less than qualifying education expenses (such as tuition and fees, the cost of books, supplies, and equipment, and room and board).[a] A portion of withdrawals in excess of qualifying education expenses is taxable to the beneficiary.[b] The contribution limit for 2002 is US$2,000 for each beneficiary. This limit begins to be reduced for individuals at a modified gross income of US$95,000 and reaches zero at US$110,000 (for joint returns, the limits are doubled).

Another tax-preferred way to save for education expenses in the United States is through qualified tuition program (commonly called a 529 plan), to which up to US$11,000 per year may be contributed. Under President George W. Bush's *Economic Growth and Tax Relief Reconciliation Act* of 2001, funds in 529 plans now accrue on a tax-exempt basis. Again, withdrawals to cover qualifying expenses are not subject to taxation.

The United Kingdom

The United Kingdom provides no tax-preferred saving specifically for education. However, taxpayers have substantial room for tax-preferred saving that is not tied either rhetorically or legislatively to retirement. Since April 1999, individual savings accounts (ISAs), which replaced personal equity plans and tax exempt special savings accounts, have offered tax-exempt accrual on nondeductible contributions (see United Kingdom 2002 for details, and Banks and Smith for analysis).

A defining difference of these funds in comparison with those of the United States and Canada is the treatment of withdrawals — no restriction is made on the purposes or the amounts of withdrawals. Withdrawals are entirely exempt from tax. In accordance with the United Kingdom's partial integration of the personal and corporate income taxes, a 10 percent dividend tax credit is paid into ISAs for qualifying dividend income. The annual contribution limit is £5,000 per year (£7,000 for the first year), independent of the contributor's income. These accounts can be used to save for future education costs or any future expenditures the household desires.

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a From 2002, some elementary and secondary education costs qualify as well. See United States (2001) for more detail.

b The proportion of the withdrawal excluded from taxable income approximates the proportion of the funds withdrawn that represents the original contribution from after-tax income.

room, however, both the regular income tax and the surtax can be avoided by rolling the AIP into an RRSP (to a lifetime maximum of $50,000).

Assessment of the RESP

How does the RESP program stack up as a tax-sheltering mechanism? Compared to the tax-sheltering in RRSPs, the RESP is more generous because of the CESG grants, but less generous because of the potential taxation of EAPs. In addition, if the beneficiary does not pursue postsecondary education, the tax treatment is less generous (although the availability of AIPs and the family plan have lowered the cost of this contingency substantially).

The complexity of the RESP is striking. Its core economic feature is the (partial) sheltering of accruing income from taxation. Although RESPs give households access to such sheltering, they do so at the cost of diverting a large amount of society's resources into administration, both within the government and outside in the financial and legal sectors. One must question whether the RESP is the least-cost mechanism to give households further opportunities to shelter accruing income from taxation.

One can also ask how Canada compares with the United States and the United Kingdom. The United States recently expanded its tax preferences for education saving. The United Kingdom offers no education-specific preferences, but it makes generous provision for general tax-preferred savings accounts not tied to any type of future expenditures. Box 1 summarizes developments in the two countries.

Economic Analysis of RESPs

In this section I use some tools of economic analysis to examine RESPs. To start the analysis, I employ the standard life-cycle model and make several strong simplifying assumptions about tax institutions and saving behaviour. Next, I relax some of those assumptions and extend the analysis to consider alternative ways of thinking about saving incentives. Finally, I discuss some empirical evidence on whether tax-preferred savings accounts increase household saving.

Basic Analysis

In the framework of life-cycle saving, individuals consume less than their annual income early in life in order to finance consumption greater than their income later on. Savings, therefore, are motivated by the desire to fund future expenses. (See Browning and Crossley 2001 for a recent review of the economics of life-cycle saving.)

This approach fits well with thinking about saving for the education of young people. The cost of postsecondary education, in addition to other household expenses, may exceed the annual income available during the years when they are in attendance. Therefore, when education costs arise, the household can do one of three things. It can decrease its consumption during the years of extra education costs, it can draw down previous savings, or it can borrow against future income.

Table 1: ***Example of Savers' Reactions to Saving Incentives***

	Light Saver		Medium Saver		Heavy Saver	
	Saving level	Marginal return	Saving level	Marginal return	Saving level	Marginal return
No tax-preferred saving available	$1,000	$r\,(1–t)$	$10,000	$r\,(1–t)$	$30,000	$r\,(1–t)$
$8,000 contribution room	up or down	r	down	$r\,(1–t)$	down	$r\,(1–t)$
$4,000 more contribution room	no change	r	up or down	r	down	$r\,(1–t)$
20% matching grant for first $2,000	up or down	$r\,(1+g)$	up or down	r	down	$r\,(1–t)$

Note: See the text for an explanation of the assumptions and the denotations.

In what follows, I analyze the effects of the second option — saving for future costs before their occurrence.

In a standard life-cycle model, the lifetime path of saving and consumption depends on the rate of return available on savings. When the rate of return to saving increases, the level of saving changes. The direction of that change depends on two distinct effects. The first is called the *substitution effect*. An increase in the return to saving means that future consumption now costs less than it did before. This change leads households to shift toward planning to consume more in the future and toward increasing their saving to pay for that future consumption.

The second influence is the *wealth effect*. To arrive at a given level of saving, a household needs to invest fewer dollars when savings earn a 10 percent return than when they earn a one percent return. The wealth effect, therefore, leads to a decrease in the level of saving when the rate of return to saving increases.

Combined, these two effects mean that a change in the return to saving has a theoretically ambiguous effect on the level of household saving.

An Example

The implications of this theoretical framework are illustrated in Table 1, which displays the reactions of a light saver, a medium saver, and a heavy saver. For this illustration, I assume that the three individuals would save $1,000, $10,000 and $30,000 respectively in the absence of opportunities for tax-preferred saving (row 1). I also assume that these savings are perfectly fungible across all possible uses — the funds are not earmarked for specific uses.

For each of the three individuals, the return on the last dollar of saving is taxable. Thus, I denote the return received on the marginal dollar of saving as the market return r, reduced by the tax rate t to leave $r(1–t)$.

The second row of the table sets out the saving of the three individuals when they have access to a tax-preferred account with a contribution limit of $8,000. Both the medium and the heavy saver want to save more than the contribution limit, so they exhaust their available contribution room. Thus, they still have savings on which the return to the marginal dollar is subject to taxation. Because the marginal return to saving has not changed, there is no reason for the substitution effect to have any impact on their saving level. However, the wealth effect (because of the tax break on the funds in the tax-preferred account) comes into play and leads to less saving.

In contrast, the light saver does not want to save in excess of her contribution limit. For her, the marginal return to saving increases to *r*. This change in the return to saving leads to both a substitution effect that increases saving and a wealth effect that decreases it. Overall, the theoretical effect for her is ambiguous.

The third row of the table examines saving behaviour when the contribution limit is increased to $12,000 for the three individuals.[8] For the light saver, the additional contribution room is not useful; she has not yet exhausted the previous limit of $8,000. For the medium saver, the additional contribution room is useful but not exhausted. His marginal return to saving now increases to the before-tax rate of *r*. The heavy saver continues to save more than the contribution limit, so his marginal dollar of return on saving still faces taxation. No substitution effect can be at work, but the wealth effect decreases his saving.

The final row of the table displays what happens when our savers receive a matching grant for the first $2,000 of contributions. The grant is paid at the rate of *g* per dollar of contribution. This grant can increase saving only if it affects the marginal return. Because the medium and the heavy saver save far in excess of the $2,000 matching grant limit, they do not see a change in their marginal return to saving. They experience only a wealth effect from the grant. In contrast, the light saver's marginal dollar is affected. For her, a substitution effect in favour of greater saving may or may not offset the saving reduction brought about by the wealth effect of the grant.

Lessons for the RESP

This analysis leads me to three conclusions for RESPs. First, for households not currently contributing up to their current tax-preferred limit (as in the case of the light saver), the addition of contribution room does not change the marginal saving decision. To the extent that RRSP saving is a substitute for saving in RESPs, the addition of the RESP does not matter for households who are not currently exhausting their existing RRSP contribution room.[9] Second, for those who save more than their total tax-preferred contribution limit (as in the case of the heavy saver in Table 1), the change in inframarginal rates of return has no effect on the marginal saving decision; it acts simply to transfer wealth to these households. Third, matching grants have no effect on the marginal saving behaviour of households that save beyond the grant limit. Again, those households face only a wealth effect for these households and the consequent decrease in savings.

Which of the three types of savers is most typical of Canadian households? To put the question differently, how many Canadian households would be facing taxation on their marginal dollar of saving if no RESP existed? The most recently available data on the use of RRSP contribution room date from 1997 (Statistics Canada 1999). In that year, 11.4 percent of taxfilers contributed at least 95 percent

8 Changing the available contribution room can have more complicated effects on contributions than are assumed in the example presented here. See Milligan (forthcoming) for details.

9 I do not mean to imply that I assume retirement saving is a priority over education saving. Rather, I am performing the mental exercise of imagining a world with RRSPs and asking what would happen if RESPs were not there.

of their contribution limit. Among those with incomes over $80,000, the percentage hitting their limit was 50.9. For taxfilers with incomes less than $30,000, however, fewer than 10 percent reached their contribution limit in any given year.

Over the life cycle, the proportion who are constrained may be much larger. Frenken (1995) reports that close to 50 percent of 55-to-64-year-olds contributed to their limit in 1993. However, future generations of near-seniors may face a different situation because of the expansions of RRSP contribution room in the 1980s and 1990s, as well as the introduction of the RRSP carryforward. Overall, the data suggest that the proportion of households who are constrained RRSP contributors is small.[10]

In addition, savers may hold other tax-preferred assets to avoid full taxation on the income of the marginal investment dollar. For example, extra investment in a principal residence escapes annual taxation of accruals, as well as taxation on any capital gains when the house is sold. Alternatively, investment in other assets that generate capital gains are tax-exempt on accrual and preferentially taxed on realization. On the downside, overinvestment in either of these types of assets is not consistent with the holding of a diversified portfolio.

The essence of the argument here holds, however. The number of households for whom RESPs affect the marginal investment dollar is small, and for these households, contributions' induced effect on saving may be negative.

The number of households for whom RESPs affect the marginal investment dollar is small.

Lockbox and Learning Effects

The analysis presented above makes several strong assumptions about saving behaviour. When we move away from these assumptions, some of the results change. Below I describe two deviations from the basic model: the substitutability of savings in different forms and the potential role of changing households' attitudes toward saving.

Substitutability of Savings

The basic analysis assumed that households consider their savings fungible across all accounts and types of saving.[11] Yet, in reality, one dollar of RESP savings cannot be considered identical to one dollar of RRSP savings or one dollar of housing equity. The foremost reason is differences in taxation. The tax treatment of RESP savings, as described above, makes them an imperfect substitute for other types of savings. Thus, having access to an RESP may stimulate the saving of a household that has unused RRSP contribution room.

10 This point is important because households that are not constrained RRSP contributors need not worry about wasting contribution room by using RRSPs for purposes other than retirement savings.

11 This is a standard economic assumption. Households are assumed to spend their money on any possible consumption item until the extra happiness they receive from a dollar spent on any item is equalized. If households could spend on an item only dollars that had been specifically set aside for it, then they might spend too much or too little on it compared to other types of consumption.

Another factor affecting substitutability is the degree to which individuals have "mental accounts." Thaler (1990) posits that consumers mentally assign income and saving to the consumption of specific goods — they use a mental lockbox.[12] If this postulate is true, then the creation of an account specifically for education saving may increase overall saving by keeping education savings isolated from everyday savings and consumption decisions. Locking away the funds may keep households from raiding education savings for other uses.

Having a separate mental account for education may, however, also lead to RESPs' decreasing saving. If households have some savings target in mind for their children's education, then a subsidy to the rate of return to saving means that they need to save less to arrive at their target. The increased return decreases the initial principal required to arrive at the savings goal.

The idea that parents may have some savings target in mind for education costs seems reasonable. For example, Magee (1998) provides a financial planning perspective on RESPs. She estimates a specific cost for education and then devises a saving strategy to reach the target. But if households use this framework in planning for future education, then subsidies to education saving through the RESP/CESG simply displace saving they would have undertaken on their own.

The promotion of some educational savings plans may create greater awareness of the high future cost of education.

Related to the concept of mental accounts is the idea that households need to have some type of commitment mechanism available in order to stop themselves from undersaving. David Laibson (1997) develops an economic framework in which individuals really would like to save for the future but never get around to it because every year they find it optimal to put off saving until later.[13] From this perspective, RESPs are attractive not because of their tax incentives but because of the illiquidity of funds in them. But if illiquidity represents the channel through which RESPs are thought to increase savings, the CESGs and even the tax-exempt accrual are superfluous; they could be replaced by an account that restricts access to funds without giving tax preferences.

Increased Saving through Learning

The promotion and advertising of RESPs and CESGs may create more awareness of the importance of saving and the high future cost of education. Becker and Mulligan (1997) show that spending time thinking about the future may lead households to change how much they save. In this framework, the promotion and availability of RESPs may help to subsidize the psychic cost of thinking about the future. Recent empirical evidence supports the notion of education having a positive impact on households' saving decisions.[14] RESPs and CESGs may increase saving by changing the preferences of households about saving.

However, this evidence does not necessarily make a strong case for the existence of RESPs and CESGs. If being informed about the importance of saving is

12 Mullainathan and Thaler (2000) provide a review of behavioural economics of this type.

13 For more on the economics of discounting the future, see Angeletos et al. (2001), and Frederick, Loewenstein, and O'Donoghue (2002).

14 Bernheim, Garrett, and Maki (2001) compare the saving behaviour in US states with mandatory financial education in the high-school curriculum to states without these courses and find a positive influence of learning on saving.

really the operative mechanism, then it should be engaged directly, rather than through costly tax measures. A promotional campaign about the cost of education and the importance of saving would be far cheaper than the full direct and indirect costs of the RESP and CESG tax measures.

Evidence on the Savings Impact

Researchers have created a vast body of evidence on the effects tax-preferred retirement savings accounts have on household saving. Unfortunately, this evidence is inconclusive. Some researchers find that tax-preferred savings have increased household saving, while others have found the opposite.[15] In a recent comprehensive review, Bernheim (2002) concludes the evidence is inconclusive.

The relevance of this evidence to the case of RESPs is not straightforward, as it depends on the mechanism by which tax-preferred accounts are supposed to increase household saving. If the active mechanism is the incentive effect of changing the marginal return to saving, then the evidence has little relevance for RESPs, which do not affect that return for many households. However, if the active mechanism is through lockbox provision or learning effects, then the evidence from other types of tax-preferred savings may have more relevance for predictions about the impact of RESPs on saving.

If households simply shift money into an RESP account that would have gone into other forms of saving, no new savings are created.

For any of these mechanisms to increase the saving of households, the RESP and the CESG must force them to consume less of their current income — to lower their current standard of living. If they simply shift money into an RESP account that would otherwise have gone into an RRSP, higher mortgage payments, or other forms of saving, then no new household savings are created. Funds in the RESP simply represent savings diverted from other accounts.

Summary of the Economic Analysis

The basic theoretical case for RESPs' and CESGs' improving household saving rests on the idea that these tax measures affect households that would otherwise have faced taxation on their marginal saving dollar. Given the host of other tax-preferred options available for Canadian households, this case is not strong. In the extended analysis, I explored the possibility that RESPs and CESGs increase saving by creating a mental lockbox or by exposing households to new information about the costs of education and the benefits of saving. Although these mechanisms may lead to increased household saving, it is not clear that the present forms of the RESP and CESG activate them in the lowest-cost way.

15 See Engen, Gale, and Scholz (1996) and Poterba, Venti, and Wise (1996) for a summary of the two sides of this empirical debate.

Table 2: ***Aggegate Statistics on RESPs and CESGs***

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Expenditures on CESG *(millions of current dollars)*	—	267	334	434	334	423[a]
Percentage of children with RESPs	4.7	10.0	15.0	20.0	23.0	—[b]
Total amount held in RESPs *(millions of current dollars)*	2,398	3,920	5,414	7,153	9,000	—[b]
Forgone tax revenue on income within RESPs *(millions of current dollars)*	32	30	40	80[a]	78[a]	105[a]

Sources: **Row 1:** For 1997/98 through 2001/02, Canada, Receiver General, *Public Accounts of Canada* (Ottawa, various years). For 2002/03, Canada, Treasury Board, *Estimates, Part III, Report on Plans and Priorities* (Ottawa, various years).

Row 2: Canada, Treasury Board, *Estimates, Part III, Report on Plans and Priorities* (Ottawa, various years).

Row 3: For 1997/98 through 2000/01, Canada, Human Resources and Development Canada, *Canada Education Savings Grants Quarterly Statistical Review* (Ottawa, April 2002. For the 2001/02 numbers, Canada, Treasury Board, *Estimates, Part III, Departmental Performance Reports* (Ottawa, 2002).

Row 4: Canada, Department of Finance, Tax Expenditures and Evaluations, (Ottawa, 2002), available at http://www.fin.gc.ca/parl/taxesp-e.html, accessed November 2002.

Notes:

a Projected number.

b Data not available.

A Statistical Synopsis

With an analytical framework in hand, I now turn to some data. This section offers a selection of statistics on the use and the fiscal cost of RESPs and CESGs. In evaluating the expenditures on RESPs, one should keep in mind their broad effect on government budgets. To the extent that RESPs increase saving, reliance on other government programs, such as subsidized student loans, may decrease. This counterbalance may offset some of the costs of RESPs and CESGs.

Basic Data

Table 2 provides some data on the magnitude of expenditures on CESGs and contributions to RESPs. The first row reports the direct spending on CESGs, which increased from $267 million in the inaugural fiscal year of 1998/99, to a projected $423 million in 2002/03.[16] The second row reports the percentage of Canadian children who are beneficiaries of an RESP. Notice how this number has grown since the introduction of the CESG.

16 The CESG expenditures data are drawn from the Public Accounts of Canada, which are based on accrual accounting. In contrast, the CESG expenditures set out in the "Canada Education Grants Statistical Review" of Human Resources Development Canada (HRDC) are reported on an "as-paid" basis. Because some financial institutions wait long periods before claiming their CESGs from the government, the as-paid expenditures measure underreports the amount of CESG payments that are triggered in a given fiscal year. I thank HRDC officials for assistance with these issues. I have chosen to use the data from the Public Accounts since the accrual concept aligns better with accepted accounting practices.

Table 3: ***RESP Participation by Income Group***

Households	Children Who Are Beneficiaries of RESPs
	(percent)
Annual income	
under $30,000	6.3
$30,000 – $49,999	12.7
$50,000 – $59,999	16.1
$60,000 – $79,999	21.7
$80,000 and over	29.9
all	16.4

Source: Author's calculations and Statistics Canada. "Survey of Approaches to Education Planning." *The Daily.* April 10. 2001. Available at http://www.statcan.ca/Daily/English/010410/td010410.htm, accessed November 2002.

The third row shows the stock of RESP savings at the end of the fiscal year. Since 1997/98, the amount of savings held within RESPs has more than doubled. Recall, however, that not all of these funds represent new savings. Some portion of the current $9 billion would have been saved in other forms if there were no RESPs.

The final row of the table reports an estimate of the forgone tax revenue on the income that accrues tax-exempt within RESPs. This type of tax-expenditure calculation is fraught with well-known problems, but I present the numbers here as an upper bound on the fiscal cost of RESPs. They are almost certainly too high.[17]

The Users of RESPs

Table 3 displays the percentage of children who were a beneficiaries of RESPs, as of 1999. Overall, 16 percent of children have an RESP in their name. The table breaks down this result by income group. Among children in families with household incomes less than $30,000, only 6.3 percent are beneficiaries of RESPs. The percentage participating in RESP rises to 29.9 percent of households with income over $80,000.

This increase with income is unsurprising for two reasons. First, relatively high-income households generally have higher-than-average savings overall, so they are apt to have higher levels of savings in a particular form. Second, as discussed above, high-income households are more likely than others to have exhausted the room available for RRSPs and can, therefore, be expected to participate more actively in the tax-exempt accrual RESPs offer. Households with available RRSP room do not need the extra opportunity.

Implications

This evidence on usage substantially weakens the theoretical arguments supporting RESPs and CESGs. The logical underpinning of this government intervention in the market for higher education was to help households that would have trouble borrowing. High-income households are much less likely than low-income households to have trouble accessing credit, so RESPs miss the mark. In addition, the argument that enhanced saving offsets other government expenditures, such as student loan programs, holds little water if RESPs and CESGs are held by high-income households that do not participate in such loan programs.

17 Tax-expenditure calculations make strict assumptions about the behavioural response to a change in the tax structure. The assumption underlying the numbers presented in the table is that, in the absence of RESPs, households would have saved the same amount as they did in RESPs but in a form in which accrued income was taxed on a yearly basis. Given the availability of alternative tax-preferred forms of saving (such as RRSPs, principal-residence housing and capital-gains-generating investments), the tax expenditure assumptions almost certainly lead to substantial overestimation of the fiscal cost of this tax exemption.

Policy Recommendations

The analysis presented above can be summarized in four main points. First, tax-exempt accrual in RESPs is achieved in a very complicated way. Trusts, EAPs, and AIPs make work for lawyers, accountants, and bureaucrats but add only costs to tax-exempt accrual — the core economic benefit of RESPs. This approach is inefficient.

Second, the basic economic analysis in Section 3 suggested that among households with available RRSP contribution room, providing further tax-sheltered saving can do little to increase saving. Funds that would have gone into another tax-preferred form are simply diverted into RESPs. Moreover, high-income households are most likely to be the ones who have exhausted their other tax-preferred saving room. That these households do not have trouble accessing credit undermines the theoretical case for policy intervention.

Third, the extended economic analysis reveals that RESP accounts could increase saving though nontax mechanisms such as serving as a mental lockbox for capital or encouraging learning about the importance of accumulating funds for education. On the other hand, the accounts could affect behaviour in the other direction by decreasing the saving levels of target savers. Even if these mechanisms are effective in raising saving, they could operate in more transparent and less costly ways than through the current RESP and CESG system.

RESPs do a good thing, but in a needlessly complicated way.

Finally, the distributional impact of CESG benefits raises questions. The analysis suggests that the CESG is not likely to create saving for all households. And the data presented reveal that participation in RESPs climbs sharply with income. So, even if saving is created, it is likely concentrated among Canadians with relatively high incomes. Given this finding, the negative equity consequences of the poorly targeted CESG become a paramount reason for changing it.

To recap in one sentence, RESPs do a good thing but in a needlessly complicated way, while CESGs give scarce public funds to the wrong households.

Specific Recommendations

Drawing on this analysis, I have two policy recommendations. The first relates to the CESG program, and the second more directly to the RESP itself.

Reallocate Resources from the CESG

The CESG program should be discontinued. Its probable impact on saving creation is small. It is also poorly targeted. Given the strong positive relationship between income and contributions, the CESG clearly gives scarce public resources to households unlikely to encounter problems in accessing credit markets on their own. This program does little to increase efficiency or equity in postsecondary education. Instead, public subsidies to education acquisition should be targeted closer to the student.

The amounts allocated to the CESG are not trivial. For example, the $423 million projected to be spent in 2002/03 could have provided free tuition to about

21 percent of full-time university students in Canada.[18] Alternatively, the funds would almost triple the current size of the Canada Research Chair program, if allocated in that direction.[19] These examples underscore the magnitude of CESG spending relative to other education initiatives.

As an intermediate measure, the government could pay the CESG bonus only in the year an RESP is opened. If the CESG does prompt people to think about the future, a one-year bonus could prime the pump of learning about the importance of saving. Further payments would do little to encourage more saving by families, since they have already learned about its benefits (assuming they do not forget their newly gained knowledge).

Replace the RESP

For the RESP itself, I conclude that the case for any *targeted* saving incentive is weak. There is no compelling argument for tax-preferred savings accounts specifically for home ownership, education, health, or any other future expense. I am not talking about access to tax-preferred savings vehicles that facilitate saving for future home ownership, education, or health expenditures. Instead, my argument is that *specific* tax-preferred accounts for each type of saving serve no purpose, especially given the tax-preferred savings room provided through the existing RRSP system.[20]

As an alternative to specific tax-preferred accounts like RESPs, I consider two possibilities that would provide similar tax benefits to households but in a simpler way.

RESPs could be replaced or supplemented by a general tax-prepaid savings plan (TPSP), as described in Kesselman and Poschmann (2001). As with individual savings accounts (ISAs) in the United Kingdom (see Box 1), taxpayers could contribute after-tax money to a TPSP. Contributions would not be deductible, but income would accrue on a tax-exempt basis. Withdrawals would not be taxed.

Each child could have funds deposited into a TPSP in his or her name up to some annual limit. For example, a parent or grandparent could open a TPSP in the name of each child, and contribute to it funds that would otherwise have been contributed to an RESP. In addition, amounts accumulating in the parent's own TPSP could be used for the children's education. The key advantage of this approach would be that Canadians would get the benefit of tax-exempt accrual

18 Canada had 590,700 full time university students in 1999 (Statistics Canada 2002). The average undergraduate arts tuition in Canada for 2001/02 was $3,452 (Statistics Canada 2001). At this rate of tuition the $423 million expenditure on CESGs could have paid for 122,538 students.

19 According to the Department of Finance (Canada 2001), spending on the Canada Research Chair program is expected to be $180 million in fiscal 2002/03.

20 The Department of Finance appears to have reached the same conclusion. The Liberal Party of Canada included in its 2000 election platform a proposal for "registered individual learning accounts" that were to have been modeled on RRSPs. According to an article in the *Globe and Mail* (Brown 2002, A6), the government of Canada has scrapped plans for these accounts because "sources say that research studies ... indicate that anybody who wanted to benefit fully from the program would have to earn $65,000 a year or more." Another example is the fate of the registered home ownership savings plan (RHOSP), a tax-preferred savings account specifically for saving for a down payment on a first home. It was cancelled in 1986.

Table 4: ***Comparison of Policy Proposals***

	Existing RESP	TPSP	Expanded RRSP
Taxation of contributions	yes	yes	yes
Tax-exempt accrual	yes	yes	yes
Taxation of withdrawals	if student has high income or doesn't attend school	never	if student has high income
Administrative burden of implementation	NA	high	medium
Administrative burden after implemented	high	low	medium
CESG	$423 million in 2002/03	funds put to alternative uses	funds put to alternative uses

without the hassle and cost of RESP rules and regulations that must be administered and enforced.[21]

Alternatively, RESPs could be folded into the existing RRSP system. Parents could make a nondeductible contribution to the RRSP of a child under age 16. These contributions might be limited to, say, $4,000 per child per year.[22] These funds would not be tied in any legal way to education expenses and could be withdrawn at any time, with the withdrawal being added to the taxable income of the child in that year, as with a standard RRSP.

A disadvantage of my second proposal is that both the original contribution and the accrued earnings would be taxable upon withdrawal.[23] In contrast, RESPs tax only the accrued earnings, exempting the original contributions. However, withdrawals made from an RRSP while the beneficiary was a student would be lightly taxed because of students' general lack of income and the generous tax credits available to them. If the beneficiary did not go on to higher education and instead entered the labour force, he or she could withdraw the accumulated funds but would face some taxation. thus, my proposed plan would add an incentive to continue schooling rather than enter the labour force.

This expanded RRSP option would not be burdensome to implement and would have economic properties similar to those of RESPs. Putting it in place would require only small changes to the existing RRSP framework, and it would be transparent to taxpayers.

Table 4 offers a comparison of the existing RESP/CESG tax measures with the two proposals outlined above. The primary benefit of moving to the TPSP or the expanded RRSP would be the simplification of tax administration.

Closing Comments

Students, families, and taxpayers deserve programs more effective than the RESP and CESG. Some Canadians may, however, raise two objections to my recommendations. First, some may claim that RESPs and CESGs should not be changed since they create new saving for households; saving that would not be

21 A TPSP arranged like an ISA in the United Kingdom would require little administration. Annual limits are fixed. Income from investments is not reported. In fact, UK citizens do not even have to tell the tax office that they have an ISA. (See United Kingdom 2002, 11.)

22 Over the 16 years, a $4,000 annual limit would far exceed the current lifetime RESP limit of $42,000. Thus, a smaller annual limit could apply for some ages.

23 Alternatively, some exemption for withdrawals for qualifying education expenses could be built into RRSPs, although this approach could be administratively complicated.

there in the absence of these programs. The assertion that RESPs create new household saving is not supported by strong evidence or by standard economic logic. Even if the existing program does create saving, however, the high income levels of participating households indicates that the new saving would be in households with easy access to borrowing or savings in the financing of their children's education. RESPs and CESGs miss the mark.

Second, many Canadians may be concerned that the CESG provides tax relief to hard-working families with children, and its absence would penalize these families. However, if Canadians truly want more tax relief for families with children, government could use a method much simpler and more efficient than a complex, and narrowly targeted subsidy such as the CESG. It could simply lower the income tax rates these families face.

RESPs and CESGs are likely popular with those who benefit from them and mostly unknown to the rest of the tax-paying public. In recognition of the political difficulties this situation may create for building a case for reform, I offer some advice, with credit to Hippocrates: *first do no harm*. The RESP and CESG programs should not be expanded, enhanced, or enlarged. Furthermore, no matter how worthy the desideratum, Canadians need no new savings accounts for *specific* future activities. Instead, access to *general* tax-exempt accrual on savings should be enhanced.

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