Overview of the Festschrift

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What is a Festschrift?

Festschrift literally means "celebration-writing" in German. And that is what this volume is. It celebrates the remarkable career of David Slater, which in the best Queen's University tradition of John Deutsch and Clifford Clark spanned academia and public service, on the occasion of his 80th birthday. It follows an old academic tradition that at an appropriate stage in the career of an eminent scholar a volume be put together in their honour containing the writings of colleagues. Usually, the writings must have something to do with the scholar's life work. In David Slater's case, this was an easy task as his research and interests have been omnivorous. Finding contributors was also easy as over David's long career he had many colleagues, friends and students who jumped at the chance to honour him and to participate in this endeavour.

The title of this volume, *The State of Canadian Economics*, indicates that the contributions are all from prominent Canadian economists and deal with Canadian economic issues. While we encouraged the invited contribu-tors to pick more general topics, we did not exclude papers with a specific focus. The key criteria for inclusion in the volume were that the papers had to be readable and had to deal with important Canadian economic policy issues. The one exception to this latter rule is the article by **Patrick Grady** on David Slater's career. A Festschrift would hardly be a Festschrift without an appearance by the main character — Shakespeare's play would not be Hamlet without the Prince of Denmark.

The topics covered by the papers in this volume include: fiscal federalism, taxation, pensions, international economics, globalization, regional issues, environmental economics, and labour economics. These are all fields that are dear to David Slater's heart and that he contributed to in one way or another.

Fiscal Federalism

Fiscal federalism is a quintessentially Canadian topic that all Canadian economists eventually must grapple with. When David Slater was Chair, the Economic Council launched and completed its landmark study entitled *Financing Confederation*. This study, which was published in 1981, the year before the constitution was patriated, provided the economic justification for the far-reaching set of principles governing the relative roles and responsibilities of the federal and provincial governments in delivering social policies set out in the new constitution.

Against the backdrop of *Financing Confederation*, **Robin Boadway** examines the development of fiscal arrangements and considers the substantial fiscal decentralization that has occurred over the past 20 years. Boadway makes the case that the fiscal arrangements have played an important role in improving the performance of the Canadian economy with respect to both equity and efficiency. But he also observes that over this period our federation has become the most decentralized federation in the world. Looking forward, he sees major challenges facing the fiscal arrangements. The equalization system and the political will to maintain it are in peril at the same time as disparities are likely to increase. The federal government has effectively lost control of the spending power, which has historically been one of the most powerful instruments at the hands of the federal government for managing the federation. This has left the federal government with no effective mechanism for managing the economic union. The income tax system is becoming disharmonized as provinces are engaged in competitive reductions in income tax progressivity. Attempts to arrive at cooperative solutions by federal-provincial negotiation have not been successful.

Boadway believes that the decentralized Canadian federation could evolve into one in which the provinces behave “cooperatively” with respect to the national objectives of equity and efficiency. However, he sees little evidence that this is happening. He argues that an overall vision is needed such as one that could be provided by an updated version of *Financing Confederation*. Unfortunately, Canada does not have an institution like the former Economic Council, the Commonwealth Grants Commission in Australia, or the Financial and Fiscal Commission in South Africa capable of doing the job. This is an institutional gap that David Slater has also lamented since the Economic Council was abolished.

Taxation

Taxation is an area in which David Slater has always taken an interest. When he was Chair, the Economic Council of Canada initiated its study of taxation entitled *Road Map for Tax Reform*. It is thus fitting that this volume contain three papers on taxation.

In a survey of tax reform in recent years, **Richard Bird and Michael Smart** explore the relationship between tax policy and tax research. They conclude that there have been important examples of apparent influences of research on policy. For instance, they are encouraged that the downward pressure on personal and corporate taxes has certainly been supported, if not initiated, by the increasing evidence of distortions caused by high marginal tax rates. In their view, the adoption of the GST can be explained by the acceptance of the federal government of the economic argument that Canada had to switch to a value-added tax to reduce economic distortions. On the other hand, they are disappointed that the equally convincing economic studies of the damage done by poorly-designed excise, property and payroll taxes do not seem to have had any effect. Consequently, they believe that political economy factors were probably the more dominant explanation of the tax reforms than the simple acceptance of advice from economists. Their conclusion is that if economists want to have a greater influence on policy, they need to pay more attention to the issues that motivate policymakers, including, most notably, distributional issues, and they need to write in a way, and in a forum, that will most likely come to the notice of the policy-makers.

The Economic Council's *Road Map for Tax Reform* laid the groundwork for a greater discussion of the consumption tax principle as a basis for taxation in Canada. In his paper, **Jack M. Mintz** continues this discussion by setting out the case for and against a consumption tax. He argues that the tax treatment of savings is likely to become a more central policy focus for the medium term. More practically, he cites three possible evolutionary changes that could lead to a greater reliance on consumption taxes: a sharp increase in sales tax revenues (sales and excise) to reduce reliance on income taxes; a major expansion of RRSP and pension limits to allow for greater accumulation of wealth to meet future contingencies of various sorts; the introduction of an exempt-yield tax savings plan (with restrictions on contributed amounts) that would encourage saving by individuals expecting increases in future tax rates.

More fundamentally, Mintz observes that the income tax could even be replaced with an expenditure tax system with continuing reliance on the other indirect forms of consumption taxation (sales taxes). Even though Mintz believes that the adoption of a consumption tax would certainly set Canada apart from other countries, including the United States, he holds that the technical issues, including implementation and transition issues, are not insurmountable if promoting future consumption is the key to Canada's overall development.

In the third paper on taxation, **Jack M. Mintz and Thomas A. Wilson** consider the best way to allocate the "fiscal dividend". This is the amount available to the government that can be used for tax cuts or expenditure increases within the framework of a balanced budget. In their view, although the current growth recession will reduce the potential surplus somewhat, the medium-term outlook is still for increasing surpluses. Concerned about lagging economic growth and emphasizing the importance of efficiency and productivity growth, they argue that priority should be given to debt reduction and tax cuts designed to stimulate investment and potential growth.

Mintz and Wilson make the case that a large part of the remaining fiscal dividend should be allocated towards reducing the relatively large personal income tax burden faced by many Canadian families and individuals. But they also stress that it is important to steadily reduce payroll and business taxes as well. This case is supported by extensive international comparisons of taxes in Canada with other countries that show that the burden of taxation is higher in Canada than in many other industrialized countries. It is also bolstered by the results of simulations, using the FOCUS macroeconometric model, of a fiscal package containing significant debt reduction, modest spending increases and cuts in personal, business and payroll taxes. These simulations show such a fiscal package should have favourable supply-side effects on output, employment and productivity over the medium term. In addition, since their analysis reveals that there are still important issues of tax structure that need to be addressed, they recommend that the government establish a task force to review personal income taxes and to consider the need for additional tax cuts.

Finally, Mintz and Wilson also remind us that while planned debt reduction is an important component of a growth-oriented fiscal policy, in the short run the size of the surplus should be allowed to vary with the level of economic activity. Otherwise fiscal policy will exacerbate the slowdown that is currently underway. This was a message that David Slater also preached when he was Chair of the Economic Council and that is particularly relevant in the current economic juncture.

Pensions

In recent years, David Slater's research interests have turned to pension issues both private and public. In the first of four papers in this section, **James E. Pesando** looks at the 1998 package of reforms to the Canada Pension Plan (CPP) that the federal government and the provinces implemented after extensive consultation. Most significantly, these reforms included: a sharp increase in the combined employer-employee contribution rate, from 5.85 per cent in 1997 to the steady-state rate of 9.9 per cent in the year 2003 and beyond, which will result in a much larger reserve fund — estimated to rise to about five years' worth of benefits; and the establishment of an independent, trusteed CPP Investment Board with a mandate to invest in marketable securities, including equities, in order to obtain a higher rate of return on the enlarged CPP reserve fund. The benefit reductions in the 1998 package were relatively modest.

Pesando argues that the case for the 1998 CPP reform was made entirely in terms of intergenerational equity. Surprisingly, efficiency arguments played virtually no role in the debate. Pesando questions whether the actuarial assumptions with respect to inflation and rates of return that underlie the reforms are overly optimistic and whether additional increases in premiums or reductions in benefits will be required. In his view, the next round of debate on the reform of public pension programs is already under-way in other countries like the United States. He expects that the issue will soon resurface in Canada and that policy options like benefit reductions, raising the retirement age, and partial privatization of benefits, which were dismissed in the last round, will once again be on the table.

David Slater's strong interest in the pension issue is directly related to his concern over the economic well-being of the elderly. **Lars Osberg**, a student of David's at Queen's University in the 1960s, makes the case in his paper that the major success story of Canadian social policy in the twentieth century has in fact been the reduction of poverty among senior citizens.

According to Osberg, the poverty rate, defined with the poverty line measured as one-half median equivalent income after taxes and transfers, for households headed by a person 65 or over fell from 28.4 per cent in 1973 to 5.4 per cent in 1997, while the poverty gap or income shortfall below the poverty line fell from 26.2 per cent to 15.8 per cent over the same period. In contrast, the elderly poverty rate and gap before tax and transfer income are much higher and show no downward trend. Osberg attributes the difference between the before and after transfers and taxes poverty rate and gap to the introduction of the Old Age Security in 1952 and Guaranteed Income

Supplement in 1968 and the reduction in poverty after 1973 to the maturing of the Canada/Quebec Pension Plan regimes established in 1966.

Osberg notes that income trends capture only part of the improvement in well-being enjoyed by seniors over the past several decades. Many of the current elderly population received significant capital gains from a large run up in housing prices in the 1970s and 1980s. In addition, the elderly have not been hit by the labour market insecurity that has affected the non-elderly, particularly youth, in the 1980s and 1990s. They have also greatly benefited from the introduction of universal medicare.

Osberg also finds that relative to the United States, Sweden and the United Kingdom, Canada has done the best job in boosting the income levels of seniors above the poverty line. In his view, Canada has done a remarkable job in ensuring that senior citizens receive an income sufficient to prevent poverty.

William B.P. Robson, a co-author with David Slater of a series of papers on pension issues, has written an ambitious survey of the state of Canadian economic policy in the areas of pensions and health care. He argues that it is appropriate to tackle both issues in the same paper because they are both major spending programs strongly related to the life cycle of Canadians, and face challenges arising from the aging of the population.

Robson notes that the pension debate uses the metaphor of three pillars to describe a comprehensive pension system: a safety net to guard against destitution in old age; a mandatory employment-related system to provide basic replacement income; and a voluntary system supported by provisions that reduce the double-taxation of saving. The main elements of public policy related to pensions in Canada cover these pillars. He recognizes that all three of the pillars cannot be directly applied to health care, but he argues that the three-pillar metaphor is still a fruitful perspective because it facilitates constructive responses to the pressures confronting Canada's health system and illuminates interactions between the pension and health systems. Hence his title "six pillars of social policy".

Based on his examination of Canada's pension and health-care systems, Robson makes a number of recommendations. First, he advocates more pre-funding in both the pension and health areas to cover the future cost of the aging baby-boom cohort. Second, he recommends a gradual increase in the normal age of eligibility for pension benefits. Third, he recommends the creation of a second pillar, a mandatory contribution scheme in the health area as a way to avoid the development of a means-tested system that would exacerbate the disincentives to work and save. Fourth, he puts forward the idea of a new type of saving vehicle that provides tax-relief on distributions rather than on contributions so that Canadians can avoid the high marginal effective tax rates associated with means-tested programs.

It is well recognized that the incomes of the elderly are on average much lower than those of the non-elderly reflecting their limited participation in the labour market. But do the elderly have lower levels of economic well-being? Indeed, the financial circumstances of the elderly differ significantly from those of the non-elderly and these differences may compensate for lower income, increasing consumption potential relative to the non-elderly. In his paper, **Malcolm Hamilton** uses hitherto unexploited data from Statistics Canada's Survey of Consumer Spending to examine the financial circumstances of the elderly and discusses the implications for the design of Canada's retirement income system.

Hamilton notes that there are five reasons why the unadjusted incomes of senior households should not be compared to those of younger households. Younger households often support children; devote a significant portion of their income to acquiring and financing consumer durables (cars, appliances, furniture) that seniors already possess; incur employment-related expenses (union dues, day-care, commuting costs, insurance); save part of their income for retirement; and pay higher taxes, including CPP and Employment Insurance (EI) premiums.

Hamilton presents fascinating data for different types of households on uses of income by age group. He shows that the amount of income available for consumption, that is income after taxes, mortgage payments, savings, union dues, day-care and provision for children, is actually greater for fully retired senior couples than for prime age couples ($30,400 versus $28,600) even though average before-tax income of prime age couples is double that of senior couples.

According to Hamilton, the data suggest that seniors need only around 50 per cent of their employment income to maintain their standard of living, not the 70 per cent that is commonly assumed in pension discussions. The implications of this finding for the design of the retirement system are many. Since government transfers replace 40 per cent of the income of the typical retiring Canadian, average Canadians will need little in the way of occupational pensions or retirement saving to live comfortably after 65. Most Canadians can retire in comfort if they eliminate debt and save a modest amount to supplement government pensions.

International Economics

Ever since he was in graduate school and chose imports as the topic for his PhD thesis, David Slater has been keenly interested in international economics. Over his long career, he watched with much interest the evolution of the international trading system as it expanded to cover a larger and larger share of the global economy. The next big step will be the accession of China into the World Trade Organization (WTO), which will bring a fifth of the world's population into the system. This will obviously have widespread implications for the overall system, which will be of overarching importance for Canada.

In her paper, **Sylvia Ostry**, who was Chair of the Economic Council when David was a Director, argues that if China had joined the GATT, the negotiations would have been far easier since market access under GATT was mainly about border barriers. But since the Uruguay Round the concept of market access has been extended to include not only domestic regulatory policies but also both substantive and procedural legal issues. The issue is no longer what governments must not do, but what governments must do. And it extends the Western or American administrative procedures to cover many more areas such as telecommunications, and intellectual property. Over it all is a supranational juridical system housed in the WTO, which is becoming increasingly litigious. It will be extremely difficult to integrate the non-transparent way the Chinese economy functions without "rule of law" into the WTO's highly legalized system. The Chinese will also make it more difficult to achieve the "consensus" required for the WTO to function. In addition, Chinese accession will not help to break the North-South gridlock that has tied up the WTO. Ostry proposes that China's entry into the WTO would be smoother if there were a new transition mechanism that allowed varying time deadlines for different parts of liberalization commitments and was subject to review by the WTO's Trade Policy Review Committee. In her view, the same mechanism could also be applied to Russia.

The North-South gridlock touched on by Sylvia Ostry is explored in more depth in the paper by **Kathleen Macmillan** whose first job was working for the Economic Council when David was a Director. She notes that statements from Western political leaders, under pressure from increasingly vocal protestors, emphasizing the potential of trade liberalization to alleviate poverty in the developing world, have been greeted with much scepticism by the leaders of developing countries. In spite of its pious preaching in favour of trade liberalization, the North has left in place high protectionist barriers in the textiles, clothing and agricultural sectors that discriminate against imports from the South. And at the same time, the South is still being held to WTO commitments to introduce Western-style regimes such as intellectual property measures. Nevertheless, she notes that the over 100 developing country members of the WTO and the dozens of other developing countries seeking to accede to the WTO shows that poorer countries are not yet ready to give up on the WTO.

In her paper, Macmillan takes a hard look at how effectively the multilateral trading system has really addressed developing country concerns. She also presents some concrete proposals for achieving a fairer balance in the world trading system. These include: the removal of tariff and non-tariff barriers to exports from the developing world; the reform of domestic agricultural programs; the provision of generous financial assistance and assistance in kind to developing nations to help them with implementation and trade adjustment; a substantial weakening of anti-dumping regimes; and the refusal to include environmental and labour standards in WTO Agreements.

In an empirical analysis of the migration patterns of University of British Columbia (UBC) graduates, **John F. and David F. Helliwell** show in their paper how much the situation has changed between the 1960s and the 1990s. Canadian research and graduate education have expanded dramatically, leading many more undergraduates to stay in Canada for their graduate work. According to the Helliwells, this is perhaps the single most important reason why the south-bound flows of bachelor's graduates has fallen so much from the early 1960s to the 1990s. Consequently, they argue that the resurgence of discussion of a brain drain in the 1990s has much less basis in the data, and probably represents factors specific to certain sectors, such as health spending, research and university financing, where funding support has risen much less rapidly than in the United States. It has also been fuelled to some extent by sharp increases in the numbers in temporary NAFTA visas to Canadians working in the United States, and in part to increasing gaps in salaries and tax rates in the 1990s that favoured high-income earners in the United States, relative to their Canadian counterparts.

The UBC graduate data show that over the past five decades there have been continuing reductions in the shares of UBC graduates living in the United States. For all of the large-scale bachelor's programs the proportion of graduates living in the United States has continued to fall during the 1990s. For the graduate programs, the proportion living outside Canada is and has always been high, reflecting a very international mix of both the student intake and the available career positions. For all degrees, the proportion of 1990s UBC graduates living in the rest of the world is higher than that in the United States. For graduate degrees, the proportion of the graduates subsequently living and working in Canada, and especially in British Columbia, is much higher than the share of Canadian citizens among the incoming students. With respect to the international distribution of those with the highest level of educational aptitude and attainments, as represented by the master's and PhD graduates of UBC, Canada and British Columbia stand in the middle ground between the United States and the rest of the world. Comparing the citizenship of UBC's graduate intake with the country of residence of the graduates, the United States is the largest proportionate net recipient (7 per cent U.S. citizen intake, 14 per cent U.S.-resident 1990s PhDs), Canada is the largest recipient in terms of numbers of PhDs (46 per cent Canadian citizen intake, 70 per cent Canadian-resident 1990s PhDs), with students from 100 other countries providing a net flow into Canada and the United States.

Globalization

David Slater was most closely involved in monetary and financial issues during the five years he served as Editor of *The Canadian Banker* during the mid-1960s. Those were the good old days for Canadian bankers before the Canadian banking system was opened up to foreign competition. Now it is a whole new competitive ball game as **Edward P. Neufeld** points out in his paper on the challenges that globalization poses for the Canadian banking system. He argues that the ability of Canadian institutions to withstand increasing foreign competition will depend on their economic efficiency relative to that of the encroaching competitors. In his view, the forces that have facilitated globalization of financial services have also made obsolete past measures of economies of scale and of the "optimum" size of financial institutions, and past guidelines concerning excessive domestic market concentration are no longer reliable. For Canadian financial institutions to experience solid growth in the future will require them to be internationally competitive at home and abroad. But unfortunately they have been slipping down the list of important international financial institutions as measured by the size of their assets and of their capital bases, and as a result their non-interest costs are 10 to 20 per cent higher than they would be if mergers were permitted. Otherwise, the forces of globalization will generate a persistent tendency towards increased foreign ownership of Canadian financial institutions, as has already begun to happen, and towards an increase in non-Canadian executives running them.

Neufeld is very concerned that Bill C-8, which is the new legislation reforming the financial service sector passed this year, contains discriminatory measures that will undermine the international competitiveness of the Canadian banking system. These include: a restrictive and politicized bank merger policy, which risks preventing Canadian banks from achieving the economies of scale that their much larger international competitors are achieving; the continued prohibition against the distribution of life insurance through bank branches, which directly restricts competition in the Canadian market; the continued exclusion of the banks from the car leasing business, a business almost completely dominated by foreign institutions; and the threat in the bill directed at the large Canadian banks, and not at smaller competing institutions or foreign institutions located in Canada or entering the Canadian market through the Internet, that if they do not provide certain low-cost services they will be forced to do so.

In Neufeld's view, the most glaring weakness of the new policy as concerns competition is its failure to recognize clearly that by far the most important source of future competition will be large international institutions operating directly in Canada and through the Internet from outside Canada. He regards the merger process as flawed in that it is tortuous, and therefore inevitably subject to long delays, and risks being hostage to short-term political considerations. Neufeld believes that the key question that needs to be addressed is not whether Canadians will get the world-class financial services they require, because international competition will ensure that, but whether the services will be provided by Canadian banks or foreign financial institutions.

In the second paper in this section, **Morley Gunderson** presents an overview of issues related to North American economic integration and globalization. He provides a particularly balanced perspective, a rarity in this area of highly charged, ideology-driven and emotional debate. He first notes that economic integration has both a deepening and widening dimension and enumerates the various aspects of these two dimensions in the context of North American integration, noting that in practice the different dimensions complement one another in a self-reinforcing fashion. He also points out that deeper and wider economic integration can foster internal consolidation since this integration is generally regarded as a precondition for external competitiveness.

Gunderson pays particular attention to the issue of policy integration. He argues that the emerging competitive pressures on the North from low-cost, less regulated jurisdictions in the South is the most important consequence of trade liberalization and globalization, although there is still insufficient evidence of harmonization leading to the lowest common denominator. The policy-making process is now subject to the forces of competition that apply to business and labour. He argues that the laws and regulations that will be under the most pressure will be those that are the most inefficient, that is those that protect interest group rents and impose costs without commensurate benefits.

Gunderson notes that integration represents a threat to distributional or equity-oriented policies that do not have positive feedback effects on efficiency even when the population considers such policies highly desirable. Raising taxes to finance these policies may not be the solution if mobile factors of production consequently flee to lower-tax jurisdictions. He documents the wide range of policy responses to the potential policy vacuum created by globalization and integration, including the NAFTA labour side agreement, the inclusion of social clauses in trade agreements, corporate codes of conduct, social labelling, and consumer boycotts, transnational efforts amongst unions, social groups and NGOs and union-to-union co-operation. But he finds that effectiveness of these responses to date is moot.

Gunderson raises the issue of whether the more circumscribed role of governments and greater role of market forces will in fact benefit the most disadvantaged. He notes that so far this has not been the case, although whether this negative trend will continue is an open question. He concludes by cautioning that the long-run sustainability of integration depends on the equitable sharing of the efficiency gains arising from this process.

Regional Issues

Quebec's relative growth performance with Ontario has always been an issue of concern for economic historians. In his paper **Pierre Fortin** discusses trends in Quebec's real domestic income relative to that in Ontario over the last half-century. He finds that per capita real domestic income in Quebec, as a percentage of that in Ontario, fell from 78 per cent in 1926 to 74 per cent at the end of the 1950s, with a particularly steep decline during World War II. After WWII, it then started an upward climb, reaching 86 per cent in 1999, and exhibited a particularly strong performance in the 1975–85 period. Fortin sees the WWII slump related to the proportionally smaller number of men in Quebec enrolled in the armed forces, which reduced the share of overall military pay going to Quebec. He attributes what he calls the big bubble of the 1975–85 period to the strong cyclical expansion associated with a large number of major projects accompanied by a wage explosion.

The key development Fortin seeks to explain is the 12 percentage point increase in Quebec's per capita real domestic income from 74 per cent of that in Ontario in 1960 to 86 per cent in 1999. He decomposes this change into three sources: productivity, employment and the demographic structure, and finds that faster growth in output per worker in Quebec was the most important factor, accounting for 55 per cent of the decline in the gap. In 1999, output per worker in Quebec was 93 per cent of that in Ontario, up from 83 per cent in 1954. Faster growth in the working age population accounted for 35 per cent of the decline in the income gap, and more rapid rate of increase in the employment rate for 10 per cent.

Fortin points out that the massive investment Quebec has made in education has greatly reduced that gap in average years of schooling between persons in Quebec and Ontario. Indeed, in 1991 the average 25-year-old man had received more years of schooling in Quebec than in Ontario. This development bodes well for future income growth. Equally, Quebec has also done well in investment in infrastructure and equipment and in research and development. Fortin explains the continued income gap with Ontario by the long gestation period required before the education revolution filters up to all age groups.

Environmental Economics

With global warming, Canadians are becoming increasingly aware of the importance of effective environmental policies. In his paper **Anthony Scott**, a pioneer in the areas of resource and environmental economics in this country, provides a comprehensive discussion of the role economists can and should play in the development of more effective environmental policies. A key theme of his paper is that environmental policy, particularly in crucial areas like global air pollution, is still in its infancy and effective national institutions to respond to policy challenges are still in the developmental stage.

Scott first reviews the history of environmental policy in England, the United States and Canada. He then examines the approaches of economists to environmental issues, including the market failure and ideal output approach, benefit-cost analysis of pollution, and environmental impact assessment, and identifies topics that environmental economists teach and research. The paper then compares what economists do in Canada in the environmental area compared to that in the United States, finding that academic environmental economists in Canada specialize more in theory and show little knowledge or interest in issues directly related to the environ-mental policy debate in their country of residence.

Scott argues that the nature of Canadian federalism has put an imprint on our environmental policy issues and on how economists relate to them. In the United States, Washington is the headquarters of environmental policy research. In Canada, Ottawa does not play a comparable role because of the shared jurisdiction with the provinces, leaving this country without a national centre having economies of scale in environmental law-making and enlightenment. Scott calls for closer relations between academic economists working in the environmental area and policymakers at both the federal and provincial level, seeing it as a win-win situation for both groups.

Labour Economics

The first paper in this section by **Charles M. Beach and Ross Finnie** represents the first attempt to quantify short-term or cyclical changes in earnings mobility in Canada. Mobility analysis can be seen as a complement to the analysis of income distribution. For a given degree of earnings inequality, more earnings mobility corresponds to securing greater labour market opportunity.

Using longitudinal income-tax-based data, the authors divide the employed population into eight age/sex groups: entry workers (20–24), younger workers (25–34), prime-age workers (35–54), and older workers (55–64) for both sexes; and divide the earnings distribution into lower, middle and upper regions or earnings intervals based on median earnings levels for the distribution as a whole, and calculate the proportion of workers in each group for all years over the 1982–96 period. They also develop transition matrices that show the probability of moving from one earnings interval to another over a one-year period.

They find that there have been major cyclical changes in earnings polarization and that these changes have been concentrated in recessions, notably in the 1990–92 downturn. They also find that men in particular experienced a marked decrease in their net probability of upward mobility in the earnings distribution during recessions, as the probability of moving up fell sharply as did the probability of moving down. The results of the paper are particularly relevant for an understanding of how earnings mobility may be affected by the current economic slowdown.

The skills issue is currently at or near the top of the federal government's policy agenda, given its importance for harnessing the benefits of technological advances. Policy initiatives in the area should be premised on an accurate assessment of Canada's recent experience in education and skill formation. In his paper, **W. Craig Riddell** attempts such an assessment. He provides a careful examination of trends in education expenditures and outcomes in Canada compared to other countries, looks at trends in the incidence of education, and analyzes the link between education and labour market success.

Riddell's overall assessment of Canada's record in education and skills is quite positive. He finds that relative to other OECD countries, Canada ranks near the top in terms of expenditure per student and share of GDP devoted to elementary, secondary and post-secondary education; that Canada's population is well educated by international standards, with the highest proportion of the population with non-university, post-secondary education in the OECD; and that the country's literacy skills, particularly for the young and well educated, are above average among the G7 countries that participated in the International Adult Literacy Survey. One possible weakness he identifies is the relatively low student achievement in mathematics among the G7 countries that participated in the standardized tests. This suggests Canada may not be obtaining good "value for money" from its relatively high expenditure on education.

Riddell notes that the conventional estimates of the return to education appear downward biased so that the causal effect of education on earnings may be higher than previously believed. Evidence suggests that the marginal return to incremental investment in education exceeds the average from previous investments and that there is no evidence that investments in schooling are running into diminishing returns. Riddell concludes that investments in human capital remain an important potential source of economic growth and equality of opportunity.