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*update on FAMILY AND LABOUR STUDIES is the newsletter of the Family and Labour Studies Division, a research arm of Statistics Canada devoted to analysis of the well-being of children and families and to how they interact with the labour market and social programs, particularly the education and income support systems. You can subscribe to either the paper or electronic versions and enquire about our research by sending a message to [fls-info@statcan.ca](mailto:fls-info@statcan.ca). This newsletter is also available at [www.statcan.ca](http://www.statcan.ca) by searching on the keywords "update on family and labour studies".*

## Attracting Skilled Immigrants

The extent to which Canada attracts skilled immigrants depends on two factors: who applies to come, who is selected from the pool of applicants. This is the starting point of [\*Effects of Selection Criteria and Economic Opportunities on the Characteristics of Immigrants\*](#), a study prepared by Family and Labour Studies researcher Abdurrahman Aydemir. The study examines the challenges in attracting skilled immigrants from the US and the UK and finds that in fact the more highly educated members of these countries immigrate to Canada, but the way in which this occurs and the role of immigration policy is very different. Higher educated individuals from the US are less likely to apply to come to Canada, but the opposite is the case for migrants from the UK. This reflects the economic opportunities available in these countries for the highly skilled relative to those available in the Canadian labour market.

Aydemir begins by noting that about 30% of principal applicants admitted to Canada under the skilled worker category over the 1980-98 period came from the US or the UK, placing these two countries in the top three source countries. The rest of the immigrants in this category come from a variety of other countries with very small numbers from each.

The study aims to identify the factors determining whether a skilled individual from the US and the UK will migrate to Canada. The first concern is to understand how the application process works. Aydemir recognizes that the application decision depends on the economic opportunities available in the country of origin relative to those in Canada as well as on the costs of moving. Better economic opportunities in Canada increase the likelihood that people will apply to come, while relatively better economic opportunities at home and higher costs of migration work in the opposite direction. Economic opportunities in turn depend on the characteristics that determine an individual's earnings capacity. For example individuals with higher education will choose the country that provides better returns to education other things being equal. The cost of migration depends on various characteristics such as age and the number of dependents. For

example, having more school age children may make it harder to move. The second concern is to appreciate that Canadian immigration policy plays an important hand in determining who arrives as an immigrant. Under the point system currently in place individuals with higher education and the young are more likely to be accepted.

The research uses information from landings records for immigrants arriving from the US or UK under the skilled worker class. These data permit a distinction between principal applicants—who are assessed for admissibility on the basis of their characteristics—from their dependents. This kind of information, which is not available in other data sources, highlights the specifics of the selection mechanism these individuals go through in the determination of their admissibility. The research also identifies a pool of non-migrants using samples from the US and UK Censuses.

Immigrants from these countries to Canada are indeed the more educated members of their

societies. However, it is not possible at first glance to say whether this is because Canada provides better economic opportunities to more highly educated individuals or because the selection system selects the better educated from the pool of applicants. Aydemir shows that Canada in fact provides better economic opportunities for individuals from the UK. This makes the highly educated more likely to apply to come so that immigration officers have a strong pool of candidates from which to choose. But the opposite is true for the more educated in the US: higher educated Americans are less likely to apply to come to Canada. Nonetheless the fact that immigrants from the US are more educated than the average American reflects the workings of the

*...higher educated Americans are less likely to apply to come to Canada. Nonetheless the fact that immigrants from the US are more educated than the average American reflects the workings of the Canadian selection process.*



Canadian selection process in pulling them out of the pool of applicants. In this case immigration officers have to be more discerning in their choices.

Other results show that having more dependents deters an application for migration. Being older increases the probability of applying for migration, but only to a certain point. Younger individuals have more years ahead of them to collect the benefits of migration and also it may be easier for them to adapt to a new environment. The more highly educated are also more likely to be accepted by the selection process, while older individuals are less likely to be accepted. These findings are consistent with the fact that the points system rewards the more highly educated

and the young. Individuals in executive, administrative, managerial or professional occupations are also more likely to be admitted relative to those in the blue-collar occupations. This is due to white-collar occupations receiving higher points under the occupational demand and specific vocational preparation factors under the point system.

As the results in the US case show, Canada's selection criteria have a very significant impact on the characteristics of the resulting immigrant population, but to fully understand how this happens it is important to appreciate the economic opportunities and costs that shape the decision to apply for migration. □

## Evidence Based Policy for Canadian Education

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Canadians have shown a growing interest in improving the education experience and outcomes of students. “Accountability” has gained currency in education circles and become a watch-word for policy development. Evidence-based decision-making is clearly part of this move. In a book entitled *Towards Evidence-Based Policy for Canadian Education / Vers des politiques canadiennes d'éducation fondées sur la recherche*, Statistics Canada researcher Patrice de Broucker and Arthur Sweetman of Queen's University have brought together individuals involved in the development and use of evidence in Canadian education. A wide ranging set of topics is discussed by contributors from diverse backgrounds: education academics, policymakers from various jurisdictions (federal, provincial and school boards), economists and other education stakeholders.

Using evidence to influence what students take away from their studies involves developing useful data, analyzing it, and disseminating and debating findings in education, political and other contexts. The first three papers in this volume address these broad issues. “Knowledge and Action in Educational Policy and Politics,” by Benjamin Levin (Deputy Minister of Education, Manitoba) focuses on the salience of social science evidence in policy-making. Lorna Earl (Ontario Institute for Studies in Education of the University of Toronto) looks through a very different lens in “Data, Data Everywhere (and we don't know what to do).” She focuses on teachers and principals, and the challenges they face moving into an increasingly evidence-based environment where accountability and the associated load of quantitative indicators increasingly define their world. While pointing to the potential benefits, she also argues for the importance of communication and the careful use of data since interpretation is not an objective science. In “Do Education Systems Count? The Role of Administrative and Assessment Data” Victor Glickman (University of British Columbia) makes a strong case for the value of research using data collected by the school system. He points to the development of an education data archive in British Columbia that allows academic, school district and policy partners to link changes in outcomes to systemic initiatives and thus better identify determinants of success.

Examples of the evaluation of education and training programs using data akin to that suggested by Glickman are presented in the paper by William Warburton (University of Alberta) and Rebecca Warburton (University of Victoria). In “Should the Government Sponsor Training for the

Disadvantaged?” they not only provide careful evidence about the efficacy of particular programs, but also lay out a strategy for developing and interpreting such evidence. The paper also introduces the concept of a program's “causal impact,” the difference between what participants would have experienced had they not taken the program and the actual outcomes following it. This concept comes up repeatedly, notably in the paper by Thomas Lemieux (University of British Columbia), and also that by David Green and Craig Riddell (University of British Columbia). Most would agree that the concept is crucial, even if measuring it can be controversial: in the absence of a causal impact, why educate? why innovate? In part, some controversy exists because there has been a move in recent years to more rigorous empirical analysis with a focus on measuring “causality.” This emphasis is evident throughout the volume.

Lemieux in “The Causal Effect of Education on Earnings in Canada” reviews “natural experiment” studies. For example, he looks at the long-term impact of the post-World War II federal program that supported veterans interested in going to school and assisted universities in coping with the resulting unprecedented influx of students. The estimated “causal” effect of education on earnings is on the order of 10% per year of schooling. Green and Riddell find that literacy skills are important determinants of earnings, above and beyond the level of education. Interestingly, they also point to the independent contribution of non-cognitive skills as being productive in their own right.

Nelly McEwen (Alberta Learning), in her essay “Improving Educational Performance in Alberta,” argues that an extensive research literature in education supports the idea that schools have powerful impacts on achievement and it is important to decide if particular interventions have a positive effect. She then outlines a province-wide governance structure that facilitates locally initiated and operated interventions within a provincial accountability framework. In a different way, causality is also invoked in “Les indices socio-économiques, outil de politique de l'éducation au Québec” presented by Văn Hạp Guy Hô and Guy Legault (Ministry of Education, Quebec). They describe statistical tools and a policy framework to aid primary and secondary students from low socio-economic status backgrounds. The idea is to make a very serious effort to reduce inequality in education outcomes through the provision of a level of resources adapted to identified needs. Much can be learned from regional innovations and inter-jurisdictional comparisons.

A series of essays involve large-scale assessment data and examine how they can assist in framing policy decisions. Robert Crocker (Memorial University) opens this sequence by reviewing the School Achievement Indicators Program (SAIP) in “A Decade of SAIP.” He finds “substantial differences across jurisdictions on many important aspects of school functioning, teaching and learning, and student attitudes and habits,” but argues that SAIP has not realized its potential. He sees a reliance on American research even though Canada requires its own education policy research agenda. In “SAIP: Bridging the Gap to Jurisdictional Assessments,” Gilles Fournier (Council of Ministers of Education, Canada) lays out the motivation and development of SAIP and looks to its future.

David Robitaille (University of British Columbia) introduces the Third International Mathematics and Science Study (TIMSS) with “The Relevance of TIMSS for Policy-Making in Education.” The TIMSS is a very important tool for “understanding ‘what works’ in education” since it allows for both international and inter-provincial comparisons while at the same time offering a focus on classrooms, teachers and curriculum. Like Crocker, Robitaille argues that there is much useful analysis yet to be done. Yanhong Zhang (Statistics Canada) answers this call with “The Distribution of Access to Educational Resources for 8<sup>th</sup> Grade Math in Canada: How Equitable Is It?” He finds a relationship between test scores, and the school resources and processes he measures, and observes that the latter are unequally distributed across provinces. The adequacy of math instructional resources, and the teachers’ self-reported familiarity with the curriculum, are found to be particularly important. In a complementary way Richard Jones (Education Quality and Accountability Office, Ontario) discusses “TIMSS in Ontario: Providing Information for Educational Improvement.” EQAO expended considerable effort in understanding Ontario students’ results and developed guides for teachers that make the survey relevant in the classroom. They describe the “types of errors and misconceptions found through the analysis of the TIMSS results” with links to the Ontario curriculum. The Zhang and Jones papers exemplify the usefulness of the TIMSS. Large-scale international, pan-Canadian or provincial assessments serve as useful absolute and relative measures of system performance. In this context, Don Klinger (Queen’s University) offers a warning about problems that can arise from changing assessment practices, and argues for more planning and evaluation.

Darren Lauzon (Statistics Canada) looks at “Gender Differences in Large-Scale, Quantitative Assessments of Mathematics and Science Achievement” and argues that gender gaps appear to be narrowing, and in part this is the result of technical issues involving the nature of the test and the scoring procedure employed (which he illustrates using the TIMSS). In a commentary Marjorie Clegg (Ottawa-Carleton District School Board) presents results from her school board, demonstrating the difficulty in interpreting achievement data regarding gender differences.

In a piece relevant for the current Canadian environment, John Bishop (Cornell University) provides evidence regarding exam policy in “School Choice, Exams and Achievement.” His main argument is that curriculum-based external exit examinations are associated with very desirable education outcomes, and are one of the reasons for Canada’s success. He demonstrates that they induce students, parents, teachers and school administrators to focus their energies on academic achievement.

According to Bishop, for such exams to be effective in promoting learning over the few years before they are taken there is no need to give them more than a 50% weight in determining the final course grade.

Focusing on the value of education in the labour market, Ana Ferrer and Craig Riddell (University of British Columbia) study the effects of years in school and credential receipt. They find that both are associated with increased earnings, but identify large differences across credentials, and combinations of credentials. In her paper, “L’évaluation de l’enseignement universitaire: succès ou échec,” Huguette Bernard (University of Montreal) turns her attention to evaluating university teaching, reviewing historical developments and present controversial, yet critical role.

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The fact that Canada spends more than most countries on education, and that the population is among the most highly educated in the world has led some observers to suggest that Canadians are over-educated. In the volume’s final paper, Craig Riddell argues that the labour market has experienced increasing demand for the skills produced by education, and the increasing supply of more educated Canadians is an appropriate response that has moderated income inequality.

Several themes conclude the volume. First, compared to the Canadian health system, there is much less research and evidence brought to bear on Canadian education issues. Second, there is a need to involve participants from diverse backgrounds in considering research questions in this area. Finally, there is a need to move beyond the easy to measure, to a broader set of educational indicators.

*Towards Evidence-Based Policy for Canadian Education / Vers des politiques canadiennes d’éducation fondées sur la recherche*, edited by Patrice de Broucker and Arthur Sweetman, a collaboration of Statistics Canada, the John Deutsch Institute at Queen’s University, and McGill-Queen’s University Press. □

## Does Parent or Child Know Best?

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Child health and well-being are high on the policy agenda in Canada, the United States, and many other countries. Research used to inform policies directed at improving child health and well-being is often based on surveys that ask parents to respond to questions about their children. It may certainly be the case that parents know their children better than any other adults, but are they better informed than the children themselves? How much of a difference does potential disagreement between what parents say about their children and what the children themselves experience or feel make to analyses of child outcomes? Does this depend upon which child outcomes researchers are interested in? These questions motivate the research reported in [Does Parent or Child Know Best? An Assessment of Parent/Child Agreement in the Canadian National Longitudinal Survey of Children and Youth](#), a study by Lori Curtis (Dalhousie University), Martin Dooley (McMaster University) and Shelley Phipps (Dalhousie University).

The Canadian data offer an opportunity to address these issues since children 10 to 11 years of age are asked a series of questions about their well-being that are also posed to their parents. Parental interviews are conducted in person or by telephone, while children fill out questionnaires in a private space with the guarantee that parents would not see their responses. Curtis, Dooley and Phipps use both sets of responses to determine the extent of agreement between parents and children, but also to examine if the inferences drawn from multivariate analyses of child outcomes depend on which set of responses is used.

They find that the correspondence between parent and child responses in the assessment of child well-being is only slight to fair. At the same time the data indicate that the disagreement does not arise from the unwillingness of children to report

problems or from the fact that they provide inconsistent or random answers. Agreement tends to be stronger for outcomes that are more readily observable (such as school performance based on report cards), and tends to be weaker for outcomes that are less readily observed (such as emotional disorders and indirect aggression). In about 50% of the cases studied the parent and the child gave the same response to questions dealing with school performance, while 22% of parents report the child doing better and 28% report the child doing worse than the child thought he or she was doing. Property offences also had a similar rate of agreement, but even so almost a third of parents reported a lower rate of property offences than the children themselves reported. At the other extreme only 15% of parents and children offered the same assessment of emotional disorder, with more than 50% understating the problem. Almost 50% of parents also reported a lower tendency for their children to engage in indirect aggression than children actually claimed.

The authors also model the determinants of child outcomes—including conduct disorder, hyperactivity, emotional disorder, indirect aggression, property offences, and school performance—in order to assess if the inferences drawn are sensitive to whether the parent or the child responses are used. They find, perhaps surprisingly in light of the extent of disagreement between the two sources, little difference in the inferences that are drawn. The child's gender, lone mother status, parental depression and parental income for the most part had the same influence on many of the outcomes in models based on the child reports as they did in those based on the parental reports. The influence of parental education, age and also family size was more likely to differ across the two sets of measures, generally being associated with the parent answers but not with those of the children. □

## Further Reading

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Many of these publications are available at [www.statcan.ca](http://www.statcan.ca) by searching on the author's name or by forwarding a request to [fls-info@statcan.ca](mailto:fls-info@statcan.ca).

Abdurrahman Aydemir (2002). "Effects of Selection Criteria and Economic Opportunities on the Characteristics of Immigrants." Statistics Canada, Analytical Studies Research Paper No. 182.

Lori Curtis, Martin Dooley and Shelley Phipps (2002). "Does Parent or Child Know Best? An Assessment of Parent / Child Agreement in the Canadian National Longitudinal Survey of Children and Youth." Statistics Canada, Analytical Studies Research Paper No. 181.

Patrice de Broucker and Arthur Sweetman, editors (2002). *Towards Evidence-Based Policy for Canadian Education*. Published for Statistics Canada and the John Deutsch Institute at Queen's University by McGill – Queen's University Press. □

## What's New

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### PhD Stipend Program invites Applications

The Statistics Canada PhD Stipend program is accepting applications for the 2003/04 academic year. This program, now in its sixth year, offers support to PhD candidates working on their theses who are interested in using one of a variety of newly available micro data, including both longitudinal surveys and administrative data. Through this program students have the opportunity to work at the Ottawa headquarters of Statistics Canada and are offered limited financial support. The program seeks not only to offer PhD students access to survey and administrative data to complete work associated with their theses, but also to promote awareness of the these data and

the workings of Statistics Canada to a group of future Canadian researchers as well as to the general research community. The application deadline is April 15<sup>th</sup>. For details see [www.statcan.ca/english/edu/stipend.htm](http://www.statcan.ca/english/edu/stipend.htm)

### A Conference on Education, Schooling and the Labour Market, May 29<sup>th</sup> 2003, Ottawa

The Family and Labour Studies Division is involved with the Canadian Employment Research Forum in organizing a conference that is intended to further understanding about how education and schooling foster skill development, social inclusion and labour market success. Some of the themes that the organizers

hope will be explored include: the quality of education and student outcomes; access to post-secondary education; human capital, skills and labour market success.

The conference will take place May 29<sup>th</sup>, 2003 on the campus of Carleton University in Ottawa, and is being held in conjunction with the meetings of the Canadian Economics Association. More information can be obtained by contacting any one of the members of the organizing committee: Miles Corak (Statistics Canada 613-951-9047), Daniel Parent (McGill University 514-398-4846) or Timothy Sargent (Department of Finance Canada (613-992-4364). ■



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