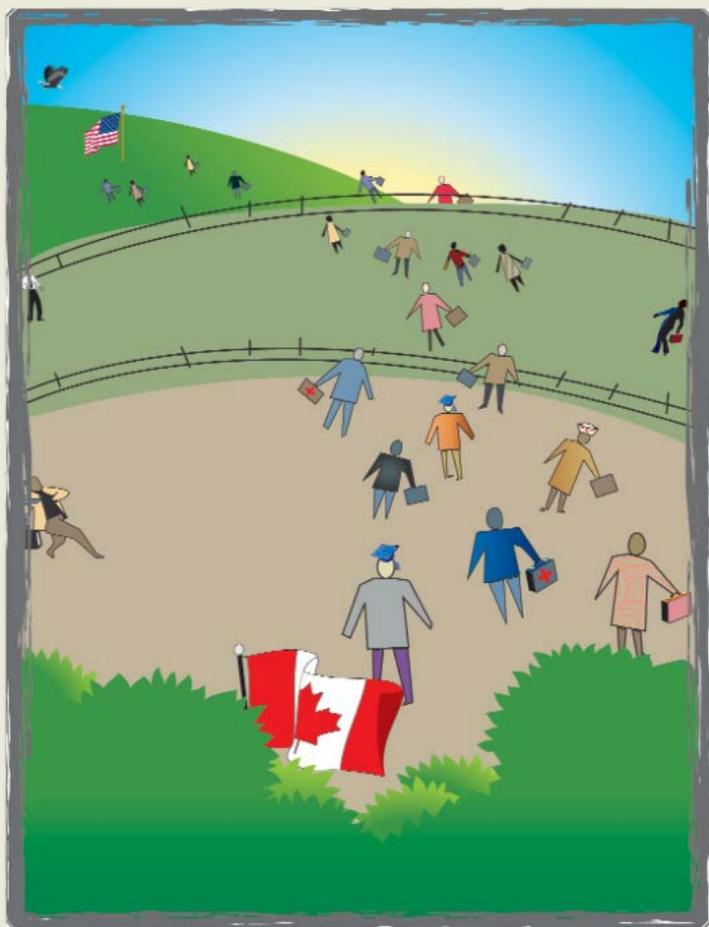


Harris, Easton and Schmitt



## Brains on the Move

Essays on Human Capital Mobility in a Globalizing World and  
Implications for the Canadian Economy

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# **Brains on the Move**

*Essays on Human Capital Mobility  
in a Globalizing World and  
Implications for the Canadian Economy*

***Stephen T. Easton  
Richard G. Harris  
Nicolas Schmitt***

with contributions by  
William Gibson, Dominique M. Gross,  
and Antoine Soubeyran

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***C.D. Howe Institute***

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## Contents

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<b>Foreword</b> .....	v
<b>Introduction</b> , by <i>Richard G. Harris</i> .....	vii
<b>Who Goes There? Canadian Emigration to the United States in the Twenty-First Century</b> , by <i>Stephen T. Easton</i> .....	1
<b>Where Canadian Scientists Work</b> , by <i>Stephen T. Easton</i> .....	13
<b>Where Canadian Economists Work</b> , by <i>Stephen T. Easton</i> .....	33
<b>Canadian Students in the United States</b> , by <i>William Gibson</i> .....	41
<b>Costing the Brain Drain</b> , by <i>Richard G. Harris</i> .....	55
<b>Competition for Foreign Talents and International Labour Mobility</b> , by <i>Nicolas Schmitt and Antoine Soubeyran</i> .....	99
<b>Cultural Clustering, Skills, and International Labour Mobility</b> , by <i>Dominique M. Gross and Nicolas Schmitt</i> .....	115
<b>Labour Mobility and a North American Common Market: Implications for Canada</b> , by <i>Richard G. Harris and Nicolas Schmitt</i> .....	133
<b>About the Authors</b> .....	175
<b>Members of the C.D. Howe Institute</b> .....	179

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## Foreword

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Economic growth depends very much on the availability of talent. During the 1990s, with a sharp increase in the migration of young and highly educated Canadians to the United States and other countries, much angst arose in Canada regarding a potential “brain drain.” The pick-up of migration — significant but not a large portion of the population — was a result of a precipitous decline in per capita income in Canada relative to that in the United States during the period between 1988 and 1997.

After 1997, Canada’s per capita income rose at a faster pace, and the “brain drain” discussion virtually disappeared from public view. In the past two years, however, Canada’s productivity has slowed and the gap between Canadian and US per capita incomes has widened, sparking renewed concerns about the migration of highly qualified individuals and entrepreneurs into and out of Canada.

In this volume, we are treated to a review of a number of issues that affect the mobility of talent. The essays provide analyses of the importance of labour mobility to the economy, and they draw several important policy conclusions from the discussion.

As Richard Harris notes, the integration of labour markets in North America will continue to be a trend worth noting, and will require policy responses in the future. Canada does succeed in bringing migrants from non-OECD countries who are attracted to communities here, but migrants from other OECD countries will come only if the economic opportunities here are superior. Entrepreneurial inflows will be a special challenge.

I wish to thank Richard Harris for developing this book. I also thank Barry A. Norris for editing and preparing the manuscript for publication, and Wendy Longworth and Diane King for their production assistance. The C.D. Howe Institute is grateful to the Donner Canadian Foundation for its support of this project, and to the John Dobson Foundation for its support of Richard Harris’s scholarship.

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Jack M. Mintz  
President and  
Chief Executive Officer

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# *Introduction*

Richard G. Harris

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In the 1980s, as trade was being liberalized around the world, Canada was in the forefront of that trend with the implementation of the 1988 Canada-US Free Trade Agreement. At that time, there was a great deal of concern as to how free trade would affect the location of industry. Smaller countries in particular were concerned that they might be de-industrialized when faced with large market competition — “industry on the move” was one of the catch phrases of the era.

As globalization proceeded in the 1990s, there was a subtle but important shift in policy concern. It became increasingly evident that economic growth was being driven less by the accumulation of capital and population and more by ideas and new technologies. The era of the “New Economy” and the large productivity gains evident in the US economy and elsewhere raised the stakes in the global competition to acquire knowledge and develop leading-edge technology. It was also becoming evident that “brains on the move” was as important as “industry on the move.” Highly skilled professionals and technical workers were moving about the globe

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at a surprising pace. The technology boom in the United States was attracting many of these types of workers from Europe, Asia, the former Soviet Union, and, by the late 1990s, from Canada as well.

The research presented in this volume started in the midst of the great Canadian brain drain debate that began around 1998. Although a substantial theoretical and policy literature on the brain drain already existed, Steve Easton and I were convinced that something “new” was happening in global labour markets. At the same time, we were concerned about the possibly askew interpretation that was being given to the emerging numbers on the brain drain from Canada.

The early evidence suggested that the aggregate flow of the highly skilled from Canada to the United States was relatively modest by historical standards and more than offset by the inflow of immigrants. Our main concern, however, was that the aggregate data were masking a more fundamental shift in the type of labour flow that was occurring. In particular, we felt that defining as “skilled” someone who simply had a college degree was hardly sufficient to deal with the reality of the New Economy. Clearly, detailed data on professionals and selected occupational groups were needed. Moreover, we were convinced that the existing theoretical framework based on the shift of the labour supply within an otherwise static economic model was seriously out of date.

With these concerns in mind, Easton and I had a series of conversations with Patrick Luciani, then director of the Donner Canadian Foundation. The Foundation subsequently offered to provide generous support of a research program to address some of these concerns and to take a new and different look at the issues. This volume is the result of that research.

Although the brain drain debate raises legitimate policy concerns, Canadians should not be alarmed by the scope of this flow of skilled labour. As Steve Easton discusses in the first essay of the volume, Canadians have always moved a lot, particularly to the United States. In the second and third essays, Easton looks at scientists and economists, two groups for which he obtained a unique data set. Although, at first glance, one might question the specific focus

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on these two groups, it makes sense when one considers that Scott and Grubel studied economists in their pioneering work on the Canadian brain drain in the 1960s, while scientists are among the principal drivers of technological change and global knowledge flows.

Easton's conclusions are not encouraging. He finds that Canadian scientists are now more than twice as likely to be relocated from Canada than they were in the 1960s, while economists have also seen a dramatic increase in the likelihood that they will take employment outside Canada. His results, if corroborated by evidence on other highly skilled occupations, suggest the brain drain problem could be more significant than we realize.

Since talent is not just born but also created, an important part of the brain drain debate is the role of Canada's education system and the effect of increasing economic integration with the United States on the creation of human capital in Canada. Accordingly, in the fourth essay, William Gibson takes a novel look at an increasingly important aspect of Canada-US integration: the decision by Canadians to obtain at least a part of their education in the United States. Gibson observes that, relative to people from other countries, Canadians' propensity to study in the United States is large and growing. Moreover, the flow is highly asymmetric: six times as many Canadians obtain their education in the United States as Americans study in Canada even though our southern neighbour has eleven times Canada's population. As Gibson notes, to the extent that the choice of educational location affects subsequent choice of employment location, this trend could be part of the reason for underestimating the size of the flow of young Canadian brains to the United States. He also notes that Canadians who study south of the border are predominantly in graduate and post-graduate professional degree programs, unlike foreign students in Canada, most of whom are in undergraduate studies. Again, this trend suggests that Canada is losing its best and brightest.

In the fifth essay, I take up the question of the welfare significance of the international flows of skilled labour. I point out that, using traditional cost-benefit analysis based on a neoclassical factor supply framework, it is virtually impossible to conclude that the

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shifts in the observed flows of aggregate skill groups, as measured by educational attainment, are of welfare significance. These results can be misleading, however, for two reasons. First, there may be a selection bias in the group choosing to leave. If Canada is losing individuals who are economic superstars, the impact could be large even if the total number is quite small — think of this as the “Wayne Gretzky model” of the brain drain. Why this might be occurring is related in part to the increased role of human capital in the overall economy and to the increasing size of knowledge industries in both the United States and Canada. The second, related, factor is the importance of knowledge spillovers: highly talented individuals are particularly critical in the links that facilitate international knowledge flows — Easton’s scientists are a classic example. Evidence is accumulating that knowledge spillovers are an increasingly important driver of economic growth. Linking this with the superstar phenomenon, I develop a theory that the income gap between Canada and the United States is being sustained by a permanent knowledge gap between the two countries, which, in turn, is the result of Canada’s failure to retain its own share of superstars.

In the sixth essay, Nicolas Schmitt and Antoine Soubeyran develop an alternative approach to the same issue, with a focus on entrepreneurs. Part of the Canadian debate on taxes and economic integration is the concern that Canada is losing the race to retain entrepreneurs — a particular worry at a time when new industries are emerging. Schmitt and Soubeyran point out the important links that exist between the available supply of talent for entrepreneurship and the productivity of new firms that entrepreneurs create. In a world in which entrepreneurs can migrate to a choice of destinations, policy changes in any destination country will affect the quality of the pool of entrepreneurs it is able to attract. Thus, for example, if the United States were to lower effective tax rates on new entrepreneurial activities, the quality of potential entrepreneurs attracted to Canada would be expected to decline. Schmitt and Soubeyran also highlight the important issue of different degrees of mobility among different types of people. If entrepreneurs in a particular country become more mobile than labour in general, that

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country could see an exodus of its most talented entrepreneurs, which, in turn, would reduce the aggregate productivity of firms set up by entrepreneurs who chose not to leave. This important theoretical observation is yet another reason that the increased mobility of brains could be having asymmetric effects on growth from one country to another — some countries are benefiting while others are losing.

Although most of the essays in this book are concerned with economic factors that drive labour mobility, noneconomic factors play an important role; however, relatively little systematic evidence exists on this issue. In the seventh essay, Dominique Gross and Nicolas Schmitt look at the effect of “cultural clustering” on immigration decisions using a sample of countries that are members of the Organisation for Economic Co-operation and Development (OECD). They find that cultural clustering has a positive effect on immigration from a non-OECD country to an OECD country — in other words, that migrants are attracted from the former to the latter. Moreover, immigrants are more likely to move to a country that contains a cultural group with which they can identify. At the same time, however, Gross and Schmitt can find no such effect when looking at immigration from one OECD country to another. For the Canadian brain drain debate, the policy implication of this result has largely to do with the demand effects of immigration policy: Canada could make itself a relatively more attractive destination for some types of internationally mobile labour by encouraging cultural clustering, although it appears that such a policy would have little effect on potential migrants from OECD countries.

There is, in addition, a distinction to be drawn between policies that affect permanent migration and those that affect the mobility of business persons and other highly skilled specialists. Historically, most countries have used immigration policy as a tool for national economic development by attempting to manage the supply of labour. With globalization, however, two new trends have emerged. First, the very highly skilled appear to be *de facto* globally mobile even in the presence of immigration controls because of the high

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demand for their skills in virtually all industrial countries. Second, demands are increasing to recognize formally and to enshrine within regional integration agreements a more liberal regime with respect to crossnational labour movements — the European Union, for example, has enshrined labour mobility rights explicitly in its legal framework. Of course, most federations, including Canada, permit some degree of labour mobility between subnational jurisdictions. Now, however, the issue of increasing global or regional labour mobility — either *de facto* through globalization and technological change or *de jure* through explicit economic integration agreements — is one with which many governments are grappling.

It is frequently suggested, for example, that the North American Free Trade Agreement be extended to cover free trade in labour as well, an issue that I discuss to some extent in the fourth essay and that Nicolas Schmitt and I examine in more detail in the eighth and last essay in this book. Smaller countries fear that, in entering into an economic integration agreement with free movement of labour, they might suffer a serious and permanent brain drain to larger partners. It is worth noting, however, that small EU countries such as Ireland have had exactly the opposite experience, and Schmitt and I come to similar conclusions regarding Canada. A permanent credible commitment to the free movement of labour is more likely, on both historical and theoretical grounds, to raise the real income of a small country that enters a large economic area.

It is still an open research question as to how the dynamics of this labour mobility process would work out. Certainly, Easton's evidence suggests that the brain drain is having a negative effect on Canada, and my own work suggests the economic costs of this effect could be large. Moving to a regime of permanent and complete labour mobility between Canada and the United States could lead to two types of adjustment. In the first case, labour could flow out of Canada until growing labour scarcity in Canada reduced the wage gap between the two countries. In the second case, jobs and investment could move to Canada to meet the supply of Canadian-grown brains. Policymakers would not be neutral between these two options, but would strongly prefer the latter. What is clear is

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that the tension this creates for both domestic and international policy is not likely to diminish soon.

The North American economic integration agenda — particularly that of the United States and Canada — clearly has been stalled since the September 11, 2001, terrorist attacks. At some point in the near future, however, the possibility of a Canadian initiative on the economic integration front is more probable. Wendy Dobson and I have discussed some ideas on such an initiative elsewhere.\* Deeper economic integration between Canada and the United States — involving movement toward some form of customs union, for example — would require, as a matter of practical business necessity, that policymakers address the issue of enhancing the free movement of business and skilled labour. Going beyond a customs union toward, say, a common market framework seems a remote possibility now, given that tightening border security is the current concern of our southern neighbour. Nevertheless, in most liberal democracies, the long-run trend — at least since the end of World War II — has been the increased international mobility of labour.

At some point in Canada's future, perhaps sooner than we think, the prospect of an integrated North American labour market will become a matter of active policy debate. Moreover, that debate will rival in intensity the one Canadians had in the 1980s on free trade with the United States. We hope this book will help to articulate what is at stake for Canadians in terms of greater North American labour market integration and of the impact of globalization on Canadian labour markets more generally.

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\* See Wendy Dobson, "Shaping the Future of the North American Economic Space: A Framework for Action," *C.D. Howe Institute Commentary* 162 (Toronto: C.D. Howe Institute, April 2002), and Richard Harris, "North American Economic Integration: Issues and Research Agenda," Industry Canada Discussion Paper 10 (Ottawa, April 2001); available at web site: [http://strategis.ic.gc.ca/sc\\_ecnmy/mera/engdoc/02b.html](http://strategis.ic.gc.ca/sc_ecnmy/mera/engdoc/02b.html).

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