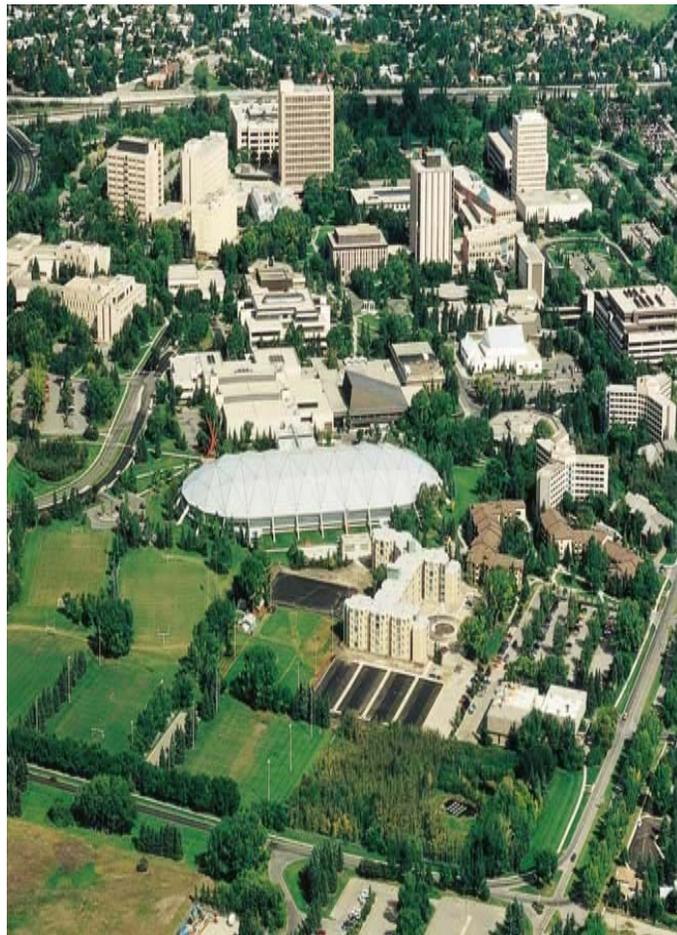


# Economic Commentaries (EC)



University Archives 92.084\_CD7\_AIR1RE-1

*Department of Economics  
2500 University Drive, NW, Calgary, Alberta, Canada T2N 1N4*

*Telephone: 403 220-5857  
Fax: 403 282-5262*

**Volume 5, Issue 1, May 2007**

# Introduction

*Daniel V. Gordon*

Welcome to the spring 2007 issue of **EC**. We start this issue with announcements of interest to our readers.

**EC** wishes to recognize and acknowledge the accomplishments of Dr. Elizabeth Wilman as Head, Department of Economics. After six years in office, Dr. Wilman will be stepping down June 30. Dr. Wilman has overseen the continued development and growth of the department. The department truly thanks Liz for her countless hours of work and sacrifice on our behalf. After a sabbatical period Dr. Wilman will return to her academic position in the Department of Economics. As of July 1 Dr. Ken McKenzie will take up duties as Head of the department.



*Professor Elizabeth A. Wilman*

---

## Table of Contents

<i>Introduction</i> .....	2
<i>Book Launch</i> .....	2
<i>Media Advisor</i> .....	3
<i>Department Baseball Team</i> .....	3
<i>Reports</i> .....	3
<i>Institute for Advanced Policy Research (IAPR)</i> .....	4
<i>Building a Consensus on Provincial Land Use Policy</i> .....	6
<i>Can Clean Technology Reduce the Cost of Climate Change?</i>	7
<i>Graduate Student Profiles</i> .....	10

---

# Book Launch

Professor Daniel Gordon Economics University of Calgary, Professor Gordon Munro, Economics University of British Columbia, and Professor Trond Bjørndal CEMARE University of Portsmouth are shown at the reception to announce the publication of ‘Advances in Fisheries Economics’ a festschrift in honour of Professor Munro, Blackwell Publishing. Professors Gordon and Bjørndal are senior editors on



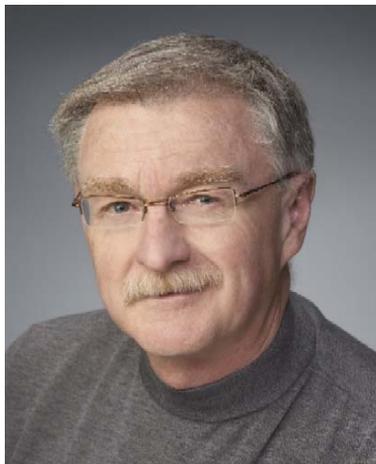
the book. The ceremony took place February 23, 2007 at Canada House Trafalgar Square, London and presentation of the book to Professor Munro was made by The Deputy High Commissioner for Canada, Guy Saint-Jacques. This *festschrift* is in honour and recognition of Professor Gordon Munro’s contributions to the advancement of the economics of the fishery. The book is a collection of 17 research papers by many of the world’s leading fisheries economists.

---

Visit the University of Calgary, Department of Economics homepage: <http://econ.ucalgary.ca/>

## Media Advisor

*Frank Atkins*



It seems that we are constantly inundated with economic news. Each day, there is a release of some new economic data. The general public finds it very difficult to absorb this data, and to understand what it means for the economy and for our daily lives. In response to a great many enquiries from local and national media to explain various economic phenomena, the Department of Economics at the University of Calgary has created the position of Media Advisor. We hope that this will aid the various media outlets in understanding the role of economic events in our lives.

The Media Advisor is Dr. Frank Atkins, who has a great deal of experience in talking with the local and national media. Frank has the ability to distill a great deal of information into a form that can easily be understood by members of the general public. If you are a member of the media, and you require some comment on economic events, please feel free to call Dr. Atkins in his office (403) 220-5864

---

## Department Baseball Team

Finally in our announcements we picture the department's slow pitch team 'Winners by Assumption' for summer 2007. The team is

captained by Ron Kneebone and Jen Winter. The team has had a strong start to the season earning victories in three of its first four games. Good luck team!



---

## Reports

Our first report is by Dr. Ron Kneebone, Professor of Economics and Director of the Institute for Advanced Policy Research (IAPR). Dr. Kneebone took up the Directorship of IAPR in May 2006 and his report brings us up to date with developments and achievements within IAPR.

The second report is by Dr. Chris Bruce Professor of Economics on land use policy or more accurately on the democratic procedures to gain consensus on land use policy amongst competing interest groups. Dr. Bruce describes an interesting approach taken by B.C.'s Land and Resource Management Plan to address land use issues by allowing all interested parties to take an active role in setting land use polices. On the surface this sounds like an unworkable format and a recipe for confusion. However, Dr. Bruce reports that B.C. has had considerable success in achieving consensus on land use policy. This is clearly a policy initiative that the Alberta government should take seriously.

Our final report is by Dr. J. A. (Sjak) Smulders Professor, Institute for Sustainable Energy,

Environment and Economy and Svare Chair in Energy Systems Analysis. Dr. Smulders reports on some recent research coauthored with Dr. Corrado Di Maria of University College Dublin investigating new green technology and green house gas emission. In this research the authors develop analytical models to assess the cost of environmental policy in the presence of endogenous technological change and to measure the bias from omitting technological change. In particular, the research compares models in which technological change is exogenous to models in which technological change in some or all sectors is endogenous so that changes in policy trigger the development of new technologies.

Finally in this issue we profile four economic graduate students; Jesse Matheson Lucia Vojtassak, Genya Hyrina and Todd Hirsch.

---

---

## Institute for Advanced Policy Research (IAPR)

*Ron Kneebone*



The *Institute for Advanced Policy Research* was established in late 2004. The structure and mandate of the IAPR reflects recommendations made at that time to President Weingarten by a number of people, most particularly, Curtis Eaton. The Institute was beset by the usual administrative burdens and start-up costs associated with the establishment of such an endeavour – most of them borne, with calm

demeanour, by the Institute's first Director, Ken McKenzie. While administrative and PeopleSoft-induced problems are by no means completely behind us, by the time I took over as Director in May 2006 the Institute had largely got its feet under it.

The IAPR is one of two inter-Faculty institutes on campus, the other being the much larger *Institute for Sustainable Energy, Environment and Economy* (ISEEE). As the label "inter-Faculty" suggests, the IAPR is tasked with coordinating and facilitating the research of scholars from across campus. The IAPR is not, then, an institute within the Department of Economics nor even within the Faculty of Social Sciences. Our responsibilities are much broader than that and meeting our responsibilities are in many ways made more difficult as a consequence. Having said that, because much of what we do in the study of economics involves gaining an understanding of human behaviour and because much of public policy can be defined as influencing the behaviour of individuals and firms in ways beneficial to society, the Department of Economics has to this point played a key role in the IAPR and will likely always play such a role.

The broad mandate of the IAPR is to enhance the quality of public policy research generated at the University of Calgary; to disseminate that research to academics, the public, and policymakers; and to engage graduate students in policy relevant research. The emphasis of the Institute is to provide a solid, analytical, evidenced-based foundation for public policy discourse by integrating scholarly knowledge with practical applications.

The internal structure of the IAPR reflects an effort to satisfy this broad mandate. The Institute is composed of five "working groups" each responsible for still broadly-defined area of public policy research;

- Markets, Institutions, & Regulation
- Labour Markets & Workplace Issues
- Government Finances & Public Choice
- Spatial Activities
- Political & Legal Institutions

Working groups are intended to bring together researchers from a variety of disciplines so they might

apply their unique insights and approaches to these issues of public policy. The effort of each working group is coordinated by an IAPR Professor. Befitting the key role of economics in the analysis of public policy, two economists have been appointed IAPR Professors; Jeff Church, who coordinates the *Markets, Institutions, & Regulation Working Group*, and me, charged with coordinating the efforts of the *Government Finances & Public Choice Working Group*. Other IAPR Professors are Daphne Taras (*Labour Markets & Workplace Issues*) from Haskayne School of Business, Doug Hunt (*Spatial Activities*) from Civil Engineering, and Lisa Young (*Political & Legal Institutions*) from Political Science. IAPR Professors are tasked with identifying researchers on campus who are interested in and able to support the working groups research agenda. Having identified those researchers they are able to provide research funds to enable researchers to hire research assistants, purchase data sets, travel for research purposes, etc.

From time-to-time the IAPR will also identify “Research Themes” that define a more narrowly-focused issue of public policy. The identification of a research theme is accompanied by a call for research proposals. In 2005 the IAPR identified “Urban Issues” as a research theme and funded nine researchers – from economics, political science, sociology, geography, and engineering – to prepare studies. A few of these studies have been completed and can be accessed off the Institute’s web site. The remaining funded studies are expected sometime this summer.

The desired output of the Institute is the production of peer-reviewed, evidence-based research on questions of public policy. The Institute will not normally publish that research but instead encourages researchers to find the best possible publication outlet for their work. To this point, we have posted 46 research papers in our Technical Paper series and 17 of those have so far been published in peer-reviewed outlets. Recognizing lags in the peer-review process and the fact that 18 of our Technical Papers have been posted only in the past 12 months, this is an impressive success rate.

Another desired output of the Institute is to influence, or at least better inform, public policy debates. One way of doing that is to make our research more

accessible by preparing *Policy Briefs*; versions of Technical Papers that can be appreciated by the interested layperson and policy-makers. Whether we influence policy is difficult, if not impossible, to know. Having said that our expertise is certainly well-recognized in policy circles. Daphne Taras, for example, is one of three expert advisors appointed to the Federal Labour Standards Review. Lisa Young is often the go-to person for the media on questions of politics as it affects western Canada. Jeff Church is frequently asked to advise the federal government on matters to do with telecommunication regulation and he was recently in Paris to advise the OECD and will soon be returning to Europe to offer advice to the European Union. Doug Hunt is a key advisor to many governments, including Calgary’s, on matters related to transportation and he has very recently returned from offering advice to policymakers in India. Finally, but not least, our former Director, Ken, has recently been appointed to the Government of Alberta’s royalty review task force.

Another important part of the IAPR’s mandate is to further the education of graduate students in areas of public policy. To that end, the Institute provides a limited number of IAPR Graduate Fellowships. Last year the Institute provided support to 15 graduate students in Economics, Political Science, Engineering, and the Haskayne School of Business. Beginning this past January the IAPR also offered for the first time a graduate course that examines the process by which public policy is made. Enrolled in the course are 11 graduate students from Haskayne (4), Political Science (2), Social Work (2), Geography (2), and Law (1). The Institute is considering the idea of offering a graduate program in public policy in order to meet the demand from both the federal and the provincial government for graduate training in the skills needed to design and implement better policies.

To learn more about the IAPR, I invite you to visit our web site ([www.iapr.ca](http://www.iapr.ca)). If you wish to be added to our email list and receive notices of events and new research postings, send an email to [iapr@ucalgary.ca](mailto:iapr@ucalgary.ca) with that request..

# Building a Consensus on Provincial Land Use Policy

*Christopher Bruce*

For decades, municipalities, the petroleum industry, environmentalists, and the agricultural sector have been in constant battle over the allocation of public lands in this province.



Recent reports suggest that the government is about to announce yet another land use policy. As with most such policies, voters were given the opportunity to provide their input; but the construction of the actual policy was left to politicians and bureaucrats working behind closed doors.

This method of developing public policy has become common in Canada – politicians give us the opportunity to list our concerns, while keeping the decision-making process to themselves.

But with the development of a better-informed, better-educated electorate, this paternalistic form of policy-making is becoming outdated. In many jurisdictions now, the government does not just ask interested parties what their preferences are, it asks them to construct new policies themselves, using consensus-based approaches.

B.C.'s Land and Resource Management Plan (LRMP) represent an excellent model that Alberta might

consider adopting for the resolution of disputes about the use of public lands.

Traditionally, “public participation” in B.C., as in Alberta, had meant that bureaucrats and politicians would travel around the province listening to special interest groups’ beefs, then head back to Victoria where policy would be determined behind closed doors.

Aside from the lack of transparency, the problem with this approach is that the decision-makers are left with no basis on which to weigh one group’s demands against another’s. They may know that ranchers want more grazing land, that the petroleum industry wants more exploration rights, and that environmentalists want more natural landscape.

But when these goals come into conflict, as they inevitably do, traditional public participation processes fail to provide politicians with the information necessary to make trade-offs among the parties. Furthermore, those processes rarely create the atmosphere in which creative new ideas are developed. Rather, public forums tend to reinforce entrenched positions.

Under the LRMP, on the other hand, decision-making was taken away from politicians and bureaucrats and given to those who were directly affected.

The province was divided into 24 districts. Within each district, a board, composed of representatives of the interested parties, was given the responsibility to prepare a zoning plan for all public lands within that district.

For example, some portions of the district could be set aside as wildlife reserves, some might be open to certain types of logging but not mining, others to mining and grazing but not logging, etc. With some minor constraints, these decisions were left completely to the participants in the group.

Two aspects of the LRMP are of particular interest to Alberta’s current debate about land use. First, membership in the decision-making bodies was open to anyone who wished to participate. It was a completely democratic process, in the fullest sense of

the word, to which no group or individual was denied access.

Second, and most importantly, each group was required to reach consensus on every recommendation that was brought forward. If ranchers wanted to restrict oil and gas exploration on a region of grasslands, they had to obtain the agreement of all participants, including the oil sector. If logging companies wanted permission to clearcut the forest in a particular area, they had to obtain the permission of environmentalists, trappers, and the tourism sector.

Critics were skeptical to say the least. Who could believe that groups as disparate as environmentalists, loggers, ranchers, and the petroleum industry, which had been at loggerheads for decades, could suddenly find themselves, not just agreeing with one another, but developing the policies on which agreement would be reached?

Yet agree they did. In most of the 24 districts, the “lion did lie down with the lamb.” Admittedly, it often took a considerable amount of debate; but in the end the districts were carved into dozens of zones, within each of which detailed sets of regulations were established under which all groups agreed to live.

Of course, no group got everything that it wanted in every area. But through trucking and trading, and through brainstorming that allowed the parties to devise new means of meeting their joint goals, all groups were able to come away from the table with a plan that they could live with.

And in each case, the recommendations reached in this way paid sufficient attention to the overall public interest that the government was able to ratify the land use plans officially with only minor variations.

It might be thought that perhaps a special set of circumstances existed in British Columbia to allow these mutually-satisfactory outcomes to be reached. But that is far from the case. Indeed, animosity among the various groups in B.C. has historically been at least as strong as in almost every other province.

Rather, it was the consensus-building process itself that brought about the result; for that process has been

used successfully to resolve disputes about public policy – particularly concerning the allocation of public lands and waterways among competing uses - in thousands of circumstances around the world.

Consensus-building processes mark the next logical step in the evolution and maturation of democratic institutions. In the twenty-first century, we can expect that an educated public will demand not only that it be heard but that it be allowed to participate directly in the construction of policy – from large scale disputes about provincial land use down to local disputes over alignment of a road or construction of a new school.

---

---

## Can Clean Technology Reduce the Cost of Climate Change?

*J. A. (Sjak) Smulders*

The recent Stern report to the UK government has labelled climate change “the greatest and widest-ranging market failure ever seen.” Evidence of big disruptions from climate change as the result of greenhouse gas emissions from our economy has become stronger and estimates about the likelihood and magnitude of damages from climate change have



trended upward over the last years. To understand the consequences of climate change and to develop strategies to mitigate and adapt to it, an interdisciplinary effort is needed, including an important role for economists.

Economists have typically investigated the costs and benefits of climate change policy. Reducing emissions comes at the cost of reduced economic activity; also investments in new (energy) infrastructure and restructuring of the economy are needed. This makes up the cost. The benefits come in terms of avoiding global warming and its consequences. The cost/benefit test can be used on an enormous (global) scale to check whether proposed policies are worth undertaking, whether they are efficient (do they reach a given target at lowest cost), and whether we are taking the optimal amount of action (are we cutting emissions enough). Because of the large spatial scale (the global economy), the large time scale, and the pervasive impact of climate change as well as its remedy this is not an easy task.

To start answering these questions, economists have been building models to understand how economic activity leads to emissions and what happens to the economy if emissions are reduced (by various methods, in various sectors and countries). Such an economic ‘emissions model’ can be linked to a climate model to calculate the effects of economic measures on the world’s climate. We can even feed back the results for the climatic variables into the economic model to understand how the economy reacts in turn.

The long horizon over which climate change is relevant makes it crucial to include technological change in the models. Everybody is hoping for solar energy or other forms of carbon-free energy resources to become competitive on a large scale. Without changes in technology, it is very hard to reduce emissions at low cost. However, the challenge is to get these new technologies in the first place. There is the technical challenge, but also the economic challenge: what are the right incentives to trigger successful investment in these new technologies and what are the costs of getting these technologies. Often the focus is mainly on the effects of new technologies, which is positive almost by construction. While the cost of developing the technologies is ignored, which comes close to assuming a free lunch. So let us think a bit more on these costs.

First, the development of new technology is costly and time-consuming in itself. Once we have the clean carbon-free technologies, it might be cheaper to reduce dirty coal or oil dependence. But in order to arrive at this situation, massive research and development effort, experimentation and capacity investment is needed.

Second, technical change itself does not need to lead to reductions in the cost of climate change. After all, the introduction of fossil fuels in our society as the major energy source and applications like the car should be considered as the major successful innovations over the past century, but have actually caused the greenhouse problem. So the important question is what guarantees are there that in the future technological change is sufficiently ‘green’. This is a question on the *direction* of technological change. Moreover, if green innovation is stimulated wouldn’t this come at the cost of ‘conventional’ innovations that used to drive growth in the past? This is the question on the *rate* of innovation and whether total innovation is likely to be crowded out by increased pressure for green innovation.

Third, when we start experimenting with new technologies, it becomes harder to deal with uncertainties and risky events. Small mistakes in policy choices (e.g. imposing cuts on emissions that turn out too big once we resolved part of the current uncertainties about the climate system) might become more costly if we have invested a lot in new technologies, as compared to the situation in which we avoid incurring the fixed cost of investing in new technologies.

Among economists and climate change policy model builders there is a lot of debate on how to incorporate technological change into the economic modelling? Economics of climate change is concerned with technical change. Typically, the ‘bottom-up’ approach has been to make sure the models include all technological options that are available in the economy, in particular they include enough details about alternative energies to produce electricity or –more generally- to run the economy. The next step has been to include

learning curve effects or R&D, to account for cost reductions in the use of alternative energy. The resulting models can be called energy models, since they are very detailed in terms of energy technology, especially alternative energies. Thereby they tend to ignore technological change outside alternative energy.

In work with Dr. Corrado Di Maria University College Dublin, We argue that the main focus on alternative energy is creating a serious bias in the modelling. In our economies, growth is driven by innovation, not so much in alternative energy, but in software, electronics, cars and – in the case of Alberta – oil technology. Oil sands investment creates opportunities and growth. It is clear that more stringent environmental regulation and emission cuts would hamper these developments. The above mentioned type of modelling only considers changes in the cost of alternative energy and takes technological change in the rest of the economy as fixed – we argue that this amounts to ignoring, for example, the cost of environmental policy on the Alberta Oil sand development.

We build small analytical models to assess the cost of environmental policy in the presence of endogenous technological change and to measure the bias from omitting technological change in a particular direction. In particular, we compare models in which all technological change is exogenous (that is, fixed and unaffected by policy) to models in which technological change in some-pollution or greenhouse gas emission intensive- or all sectors is endogenous so that changes in policy trigger the development of new technologies. We can thus distinguish between two types of innovation: both types decreases the cost of production (or increase labour productivity in the economy), but ‘conventional innovation’ reduces the cost of emission/pollution intensive sectors more than that of other sectors, while green ‘innovation’ puts low-emission sectors at a relative advantage.

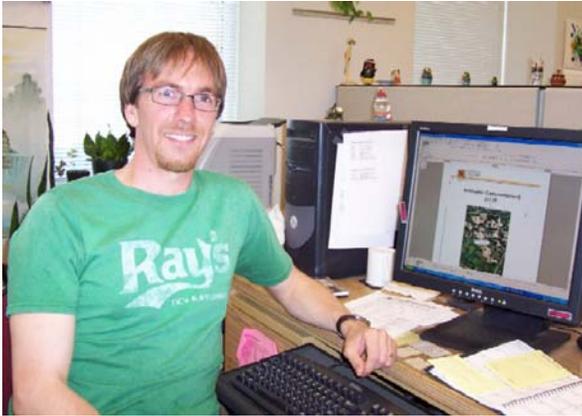
Let us consider the effects of a cut in emissions. If we only allow for green innovation, the emissions cut boosts innovation. This requires firms to incur

an investment cost and experience lower profits in the short run, but they experience higher long-run profits. If we allow for ‘conventional innovation’ only, the cut in emissions has the opposite results: less innovation, higher short-run profits and lower long-run profits. If both types of innovation are allowed for, innovation shifts from conventional to green and total innovation is likely to fall since the aggregate market size (say GDP) is smaller due to the cut in emissions. Many other models that assess the role of technology for climate change policy typically focus on the case with green innovation only and therefore are too optimistic about the role of technology in the long run.

We can also use our model (with both green and conventional innovation) to determine optimal environmental policy e.g. how big should emissions cut be? We find that the presence of endogenous technological change might actually call for less ambitious environmental policy. On the one hand, the possibility to shift technology in the direction of green emission-reducing technology lowers the cost of emission reductions and makes it more attractive to invest in a cleaner environment. On the other hand, there is the burden of the cost of investment: it is costly to shift research direction, and conventional investment is crowded out (none of this would happen if technology improves over time at a given rate in a fixed direction).

So far we have used small analytical models to explore the role of technological change for environmental policy. This has the clear advantage of being able to identify and be precise about the main mechanisms. However, the next useful step would be to incorporate these ideas into calibrated or estimated policy models. The Energy and Environment Systems Group at ISEEE would be the ideal place to work along these lines.

## Graduate Student Profiles



*Jesse Matheson*

Jesse has been awarded an SSHRC Doctoral Fellowship for 2007-2009. Jesse is a post-comprehensive PhD student working with Dr. Curtis Eaton. His research area is Veblen Preferences and Household Labour Supply.

---



*Genya Hyrina*

*Premier Ed Stelmach*

Genya was presented with the Frank Mink Graduate Economic Scholarship at the Economic Society of Calgary Luncheon Meeting February 22, 2007. Premier Stelmach was the guest speaker at the Luncheon and is seen here congratulating Genya on her scholarship.

---



*Lucia Vojtassak*

Doctor of Philosophy, University of Calgary, 2007.  
Certificate in Professional Programme, Economics, Academia Istropolitana Nova, Slovakia, 2000.  
Magister with Honours (mathematics and physics), Comenius University, Slovakia, 1998.

Lucia is moving from Calgary to Peterborough, Ontario, where she is starting her academic career as an Assistant Professor at the Department of Economics, Trent University this coming July.

---



*Todd Hirsch*

Master of Arts, University of Calgary, 1993.  
Bachelors of Arts, Honours, University of Alberta, 1989

Todd has held economic positions with Canadian Pacific Railway, the Bank of Canada, and most recently as Chief Economist at the Canada West Foundation. Todd is also a sessional instructor in both the department of economics and the Faculty of Continuing Education, University of Calgary. In May 2007, Todd will join ATB Financial as a Senior Economist.

---