PIECING IT ALL TOGETHER

Policy

Governance

Funding

Community

Research

Data

HOW DATA INTERACT WITH THE RESEARCH LIFECYCLE

Why *The Data Matter*

We at the Canadian Research Data Centre Network (CRDCN) want to introduce you to our newly rebranded quarterly newsletter – *The Data Matter*.

This is an exciting time for the CRDCN, with new projects planned, new staff having joined our central team, and many key milestones approaching, including the announcement of our CRDCN Data Forum, taking place on October 19, 2022. We are thrilled to welcome experts from Statistics Canada, as well as a keynote panel on *Data Democratization: balancing private data and public engagement.*

With this in mind we thought it was a great time to refocus our efforts on the quarterly newsletter with a fresh look and a new vision.

Each issue of *The Data Matter* will have a theme and will feature articles pertaining to that theme that showcase the work and happenings of CRDCN and our network researchers.

We hope you will find these articles interesting, useful and thought-provoking.

Additionally, you can find information about all upcoming events on our website.

Thank you,

Ryan Murphy
Editor, *The Data Matter*

Putting the data to work: From data to research-informed policy, programs and practice

It is widely understood that evidence-based decision making is critical for government policy, programs and practice informed by relevant data, analysis, and research, as those decisions affect the lives, work and communities of Canadians every day.

What is sometimes obscured, however, is that data in their raw form do not stand on their own. The CRDCN research community plays a key role in putting the data to work. In this article, we would like to showcase just a few examples of this process from the past

year alone:

• CRDCN researcher Xavier St-Denis and his team created a report for the Ontario Council for Articulation and Transfer (ONCAT), providing previously unavailable information on the employment outcomes of post-secondary education pathways, specifically statistics on non-linear accumulation (for example, a person who receives a bachelor's degree and then goes to college). This work can have national, regional and provincial implications and better inform both students'

educational choices and the policies and practices of colleges, universities and the organizations and governments that seek to support them.

• Another example is the recent three-year review of the Cannabis Act by the Public Health Agency of Canada (PHAC), which drew on research from members of the CRDCN researcher community. For instance, to learn about the prevalence and determinants of home cultivation and the curtailment of the illegal market, PHAC referred to Andrew David Hathaway's *"How well is cannabis legalization curtailing the illegal market? A multi-wave analysis of Canada's National Cannabis Survey"*. As well, PHAC consulted Kris Inwood's work on home cannabis cultivation. Inwood is currently working on a project to investigate marijuana-related traffic offenses to understand the impact of legalization on impaired driving among Canadian youth, which will further inform PHAC of the consequences of cannabis legalization.

• Finally, we would like to highlight Naomi Lightman's research on population health and health services. The deep and nuanced understanding of the public health landscape that the research provides has been invaluable over the course of the pandemic to predict how disadvantaged groups and communities will be affected by the pandemic and pandemic-related policies. At a COVID-19 press conference, Canada's Chief Medical Officer of Health, Theresa Tam, cited research by Lightman on the topic of the pandemic's impact on care workers.

We want to recognize the work of all CRDCN researchers – who live and breathe data, taking data in their raw form, organizing the variables, and applying sophisticated statistical techniques to produce meaningful results that can and do help to inform government policy, programs and practice – as they draw on their deep knowledge and work in and across disciplines.

The CRDCN research community – with more than 2,000 researchers at different career stages and from disciplines including (but not limited to) economics, sociology, epidemiology and health – may not always be at centre stage in the public eye, but they are putting the data to work for the public good.

What you need to know

• Evidence-based decision making is critical for government policy, programs and practice affecting the everyday lives of Canadians.

• The CRDCN research community plays a key role in putting data to work.

• CRDCN researchers take data in their raw form, organize the variables, and apply sophisticated statistical techniques to produce meaningful results that can and do help to inform government policy, programs and practice.

Collaboration is more than just working together

Collaboration among colleagues is key to the research lifecycle, playing a part in everything from the research work itself to funding, policy, community and governance. It also leads to closer ties between researchers from different countries and ultimately leads to improvements in data systems.

Recently, CRDCN Academic Council Chair and Economics Professor in the Department of Political Science at the University of New Brunswick, Ted McDonald, collaborated with international colleagues on a comparison of immigration policies in Canada and Australia.

As the two countries have similar demographic, social and geographic characteristics, and a similar drive to attract skilled immigrants, Dr. McDonald and his colleagues saw an opportunity to probe the effectiveness of their immigration policies. They did this through comparison of census data and qualitative interviews.

"Although the trends in levels, source country composition, and immigrant characteristics are similar between Australia and Canada, the earnings of skilled immigrants relative to equivalent native-born earnings are far lower in Canada than in Australia across a wide range of occupations," says McDonald. "We argue that this reflects the Australian government's greater power to initiate and drive policy reform agendas, early strategies designed to enhance foreign credential recognition and a heightened role for employers including through two-step migration."

McDonald's ties to Australia, including holding a Ph.D. in Economics from the University of Melbourne, were also behind the move to collaborate. "On one trip back to Melbourne a number of years ago I had the occasion to meet Professor Lesleyanne Hawthorne, who is one of the preeminent international experts on foreign credential recognition and the experiences of foreign trained health care professionals," says McDonald. "We were discussing our work and how similar immigration systems seemed to be producing very different outcomes for some occupations, and that led to a successful grant application to the Australian Research Council and our current collaboration."

This ongoing collaboration will also be facilitated by increased remote access to microdata for McDonald's Australian colleagues. Though Canadian researchers can obtain microdata files through secured access facilitated by CRDCN, Australian researchers relied on a census data extraction tool from the Australian Bureau of Statistics for this paper. Increased access to microda-

ta will make the next phase of their collaboration much easier, according to McDonald. However, only aggregate vetted results can be shared between countries.

For McDonald, international collaboration offers a richness of new insights into the effects of policy, which would not have been visible in a single-country study. Another upside to working with colleagues from other areas or disciplines is access to their expertise in those systems. A highlight, especially as of late, is the ability to travel and learn the systems of other countries.

There are two specific insights that international colleagues could provide in this instance, according to McDonald. "The first is that an expert in the subject matter area from another country can identify policy differences that might lend themselves to a comparative empirical analysis, and the second is that an expert can suggest improvements or innovations to the data access process," he says, adding that Canada's data access, collection and use systems can also benefit from developments in other countries.

In terms of difficulties faced when working with data from different countries, McDonald says, "This is actually one of the main areas of challenge when it comes to multi-jurisdictional work – trying to harmonize data definitions, sample specifications, and similar aspects with secondary data. Having access to microdata master files is helpful, but we are still using secondary data with their set data collection and definition structures. Ideally researchers would want to be able to have as similar an analytical framework as possible if causal inferences are to be drawn, but the fact that there are differences we can't control for should not preclude multi-jurisdictional analyses from being undertaken."

To address this, researchers need to be straightforward about these limitations at the beginning of their collaboration. "As statistical agencies collaborate more, we will continue to see a move towards harmonization around best-practice, which will certainly facilitate more multi-jurisdictional work. And of course, it is still generally not possible to combine confidential microdata across countries, but advances in both governance and in technology suggest that we are slowly making progress towards that objective while respecting privacy and legal requirements," McDonald states.

What you need to know

- Collaboration provides the opportunity for greater insight into different research and data environments and systems.

- International collaboration is something worth adding to one's research career, both for professional and personal growth. With it comes greater perspective and an opportunity not just to explore the world around you but to make concrete comparisons in research between different countries.

- The future of collaboration across countries is bright, as more agencies collaborate and there is a move towards both harmonization of best practices and the ability to combine confidential microdata.

National Policy Challenge: Training the next generation of researchers

On June 8, the Canadian Research Data Centre Network (CRDCN) held its annual National Policy Challenge (NPC) in partnership with Statistics Canada and SAS Canada.

The competition provides students with the opportunity to compete for monetary prizes, but more importantly, it challenges them to consider the policy implications of their work as up-and-coming researchers.

Established in 2018, the NPC was the brainchild of CRDCN's former Knowledge Translation Coordinator, Sarah Fortin. "It was intended to combine two (parts) of our core mission at CRDCN: uniting the worlds of research and policy, and training the next generation of highly qualified professionals," says Grant Gibson, Assistant Director Research & Evaluation at CRDCN. "Rather than create a series of training sessions, we decided to combine the training aspects with a research project and engage the students in a competition to increase student engagement, create more personal interactions between students and more established researchers and policymakers (through the mentorship and finals elements of the challenge), and provide a prize to our best policy-oriented researchers."

Engaging with students from across the country and showcasing career building possibilities are also key aspects to the NPC. "Regional perspectives are a necessity in today's world," says Mark Morreale, Senior Global Academic Program Coordinator at SAS. "The beauty of this event is we are able to harness the awesome infrastructure in the CRDCN. SAS is provided at no cost to all 30+ Data Centres. As a result, government agencies can recruit from all over the country."

Additionally, the competition provides these students training on how to effectively communicate their research findings to a large audience and in a way that is accessible to a non-academic audience. This skill is critical to ensure their research can provide broad so-

Winners of 2022

The CRDCN would like to thank all finalists, judges and mentors for their time and effort. The 2022 National Policy Challenge could not have been such a success without your work.
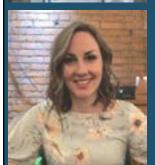Our winners for this year were:

1st Place and Policy Pitch Prize winner:
Angèle Poirier,
University of Regina

Topic: *What motivates recreational cannabis consumption in Canada?*

2nd Place:
Samer Hamamji,
University of Toronto

Topic: *The Association of Healthy Food Choices Aligned with Canada's 2019 Dietary Guidelines Recommendations, on Cardiometabolic Risk Factors using the Canadian Health Measures Survey*

3rd Place:
Samantha Skinner,
Western University

Topic: *Caregiving contexts and informal carer health within a Canadian context*

See full press release

cial value. "The CRDCN National Policy Challenge is an excellent opportunity for a multidisciplinary cohort of graduate students to engage in applied, evidence-informed policy analysis and research," says Ramona Kyabaggu, an NPC judge and Assistant Professor at the University of Regina. "The Research Data Centre's secure microdata collections give students access to longitudinal, multi-level, multi-sectoral, multi-jurisdictional, and often linked datasets, which provides the variety of data needed to research today's wicked policy problems."

The students also learn how to access and use Research Data Centre (RDC) microdata files, which provides training on a host of useful career skills. "In order to access the data, the students submit a proposal to the RDC program. This requires them to defend the scientific merit of their project and clearly explain their proposed analytical framework and data needs. The skills learned here translate to other research proposal writing (such as grant writing) that they will conduct throughout the rest of their academic program and beyond," says Peri Abdullah, Research Assistant with CRDCN. "In creating the proposal, the students also go through the data discovery process, learning firsthand how to interpret metadata and documentation to understand whether a given dataset is an appropriate tool with which to approach their research question."

CRDCN researchers across Canada are using and analyzing the same datasets used by the Canadian government, which can also offer researchers a distinct edge when they begin their careers. The students also learn about confidentiality and preserving the security of individuals in the datasets by going through a vetting process before releasing their research results.

Providing an edge in the job market and generating new talent is also part of the reason why SAS has participated in the NPC. "The SAS Academic Program is designed to help create the next generation of talent for existing and new customers," says Morreale. "The idea for this event came from a discussion with Statistics Canada around hiring good talent. It is hard to determine someone's methodological acumen from a resume or one hour interview. By sponsoring this contest, Statistics Canada and other government agencies are able to quickly assess the skills of these entrants in an applied manner."

Students also have the opportunity to interact and network with academics and policy makers in their fields during the NPC through interactions with judges and NPC-facilitated mentorships. "While judging is my main role at this event, I also see this as an opportunity to provide constructive criticism," says Marc Frenette, an NPC judge and Research Economist at Statistics Canada. "Being firmly situated at the three-way intersection of Data Lane, Government Policy Avenue, and Academia Way for the better part of a quarter century, I believe I can provide unique perspectives to the next generation of empirically-oriented, policy-relevant researchers."

Kyabaggu echoes that sentiment. "The opportunity to receive feedback from experienced judges is icing on the cake, enabling students to reflect on and refine their process, while also benefiting from networking within a community of practice of peers, researchers, and policy practitioners from across Canada," she says.

What you need to know

- The National Policy Challenge (NPC) is a recurring annual challenge.

- The NPC began in 2018 and was intended to serve two parts of CRDCN's mission: uniting research and policy, and training the next generation.

- The NPC provides a wonderful opportunity for students to learn how to communicate their findings to larger audiences and work with large datasets and RDCs. It also provides the opportunity to be mentored and to network with experienced researchers.

If you have any feedback or ideas for future articles or themes, please reach out to us at info@crdcn.ca.