What is Innovation for?

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ABSTRACT

While the concept of innovation was initially considered to be a way to improve the workplace, support staff and create systemic change when needed, today it has been coopted by organizations and governments pretty much solely as a way to do what they typically do—control employees, reduce costs and accomplish its limited objectives

Introduction

The idea of innovation has reached a mature stage. Twenty-five years ago, it was a newly-embraced concept, seen to have much potential, much as artificial intelligence is seen today. Governments, non-government organizations (NGOs) and corporations tend to follow policy and administrative band-wagons, and they followed this one as well. Innovation became one of those band-wagons, receiving a considerable amount of attention, then more-or-less disappeared as a high-profile notion, replaced by such concepts as resilience. Today, many have attempted to be more innovative but in specific and limited ways that for the most part closely resemble the organization as it was before, especially in its internal power structure. The OECD and governments list expenditures on innovation under the category science, technology and innovation.[1]

Glor was one who thought innovation could be a good tool for systemic change (the Saskatchewan government of 1971-82) had addressed many systemic issues (developing and marketing its minerals, securing decent prices for its agricultural products, funding its government), and tried but failed to solve others (e.g. the high cost of transporting agricultural products from Canada's land-bound prairies). There has been systemic change, but not what she expected. Since the Blakeney government, Western economies have been transformed from some local small manufacturing and mixed private sector-public sector economies to much more private sector-dominated economies, dominated by large foreign corporations, developed in keeping with neoliberalism. Neoliberalism is an economic model developed and adopted about two hundred years ago. Free trade has helped this happen. In the current context, however, the private sector's demands of the public sector have increased, not decreased, as the neoliberal theory would have suggested. As has the economy, several political parities have also adopted an earlier model in the West, with acceptance and adoption of economies and policies that have

[1] https://data-explorer.oecd.org/?fs[0]=Topic%2C0%7CScience%252C%20technology%20and%20innovation%23INT%23&snb=35&fc=Topic

produced increased economic inequality, corruption and cronyism, most notably in the United States (USA), where politics today look considerably like politics a hundred and twenty-five years ago in the Gilded Age, known for its rapid industrialization and inequality. Today the West has become deindustrialized and accepted the same levels of inequality, although in Canada its social security system has softened its effects to some extent. In cities across Canada, however, a quarter of the population uses food banks because they cannot afford to feed themselves, because incomes are inadequate both as provided by employers and social security.

Patterns of Innovation

Twenty-five years ago, Glor (2001a, b) developed a schema for innovation, based on the individual innovator, organizational culture and its challenge dynamics involved in it. It is reproduced in Table 1.

Table 1: Innovation Patterns, Based on Individual, Cultural and Challenge Dynamics Innovation

Innovation Pattern	Individual Motivation	Culture	Magnitude of Challenge
Reactive	Extrinsic	Top-down	Minor
Active	Extrinsic	Bottom-up	Minor
Necessary	Extrinsic	Bottom-up	Major
Imposed	Extrinsic	Top-down	Major
Proactive	Intrinsic	Bottom-up	Minor
Continuous	Intrinsic	Bottom-up	Major
Buy-in	Intrinsic	Top-down	Minor
Transformational	Intrinsic	Top-down	Major

Different patterns could be used to support different kinds of innovations. If a decision-taker wanted to deal with a minor problem, a reactive, active, proactive, or buy-in pattern might be appropriate. If s/he wanted to deal with a major problem, and make major changes, a necessary, imposed, continuous or transformational pattern might be adopted. Table 2 suggests the kinds of objectives that have been served in examples of each type of innovation.

Table 2: How Innovation Patterns Have Been Employed

Type of Issue	Innovation Pattern	Example	Problem/Objective
One problem	Reactive	Introduction of operating budgets in Government of Canada	The GoC needed better control over its budget (Glor, 2001b: 10).

Type of Issue	**Innovation Pattern**	**Example**	**Problem/Objective**
Ongoing problem	Active	Customs Canada Missing Children*	Children were being kidnapped & removed from Canada, esp. when fathers had more rights over their children than mothers in their home countries. (Glor, 2001b: 11).
Crucial problem	Necessary	Shipyard Repair Atlantic (power, way done), Dpt. National Defense (DND)	Union and management jointly replaced a local role culture with a local task culture (Glor, 2001b: 11-12).
Direction	Imposed	Literacy New Brunswick (major change in outcomes, changed delivery culture by changing delivery agent) Govt. of Russia Private sector	Substantial illiterate population (Glor, 2001b: 12-13). Economic stagnation at end of Cold War
Systemic problem	Proactive	Agriculture Canada partnerships data base*	Need for systemic change but not addressed in this innovation, which created a database (Glor, 2001b: 13).
Complex problem	Continuous	Health Promotion, Health Canada	To increase health, a complex problem, in the Canadian population, involving individuals, communities and government policy and resources (Glor, 2001b: 15).

Type of Issue	Innovation Pattern	Example	Problem/Objective
Problem affecting many employees &/or members of public	Buy-in	City of Mississauga, Canada, Capacity Building	A human development plan initiated by a capability development program. Led out of the Commissioner of Human Resources' office, 3 staff were hired to implement this management training program and later a training program for a wider group of staff. Its purpose was to introduce a cultural shift in the city. Separately but at about the same time, the city introduced a strategic plan, a management strategy, a human resources vision, service standards, an awards program, and a re-engineering program (Glor, 2001b: 14).
Fundamental problems	Transform-ational	Purchase 40% of Sask. potash industry, a controlling interest, secure influence on the market**	Formed from the merger of PotashCorp and Agrium, Nutrien is the world's largest potash producer, with major operations in Saskatchewan, Canada. PotashCorp was the privatized provincial crown corporation, originally formed in the early 1970s (Glor, 2001b: 14-15)..

* The source of these examples was presentations to the Innovation Salon.
** Saskatchewan minerals were not being developed or promoted very substantially by industry. As U.S.A. President Donald Trump has announced, the provincial government purchased a stake in the industry, less than half, so it deliberately did not have control. This gave it the opportunity to intervene in the market and to promote potash. While this innovation is identified as top-down, the Government of Saskatchewan spent years negotiating the purchase with the (American-owned) industry, which actively resisted it.

Profiles of Patterned Innovations

The patterns addressed the factors of organizational culture, individual motivation and the magnitude of the problem the innovation was trying to solve. Each pattern had two possible settings for each factor, producing eight patterns. The following discusses examples of the patterns.

Organizational Culture

Organizational culture was considered as top-down or bottom-up. The following examples suggest the Government of Russia used a top-down approach, the Province of Saskatchewan a bottom-up approach and the Government of Canada (GoC) a combination of top-down and bottom-up approaches (external resources and internal restraint).

Government of Russia

The Government of Russia began its innovation initiative in about 1998. Its initial step was to adopt legislation instructing its civil servants and public corporations to be innovative.[2]

Canadian Government of the Province of Saskatchewan (GoS)

Organizational culture influences whether public servants can promote, support and/or accept innovations. While central agency staff of the Blakeney GoS were interested in innovation, some line agency staff had difficulty accepting them. Staff whose backgrounds were in front-line positions, trying to detect cheaters, had a had time accepting innovations that were more respectful of clients. Seeing cheating has an over-sized impact on perceptions. This is true in departments of social services but also among clerks in stores such as Walmart.

The GoS made new funding available and asked departments to submit proposals to its Treasury Board (that allocated budgets) for approval of demonstration projects of innovative projects, followed by tracking of results of the approved projects. Then-Premier Allan Blakeney indicated that if the projects were successful, they could potentially be expanded into province-wide programs. Saskatchewan's was a developed innovation initiative, combining bottom-up proposals and implementation with top-down allocation of funding and approval. Unlike in many governments, they were funded with new departmental money.

Government of Canada (GoC)

The Government of Canada (GoC) has had a number of innovation initiatives over time. During the 1990s it created a Quality and Innovation Unit, headed by a Director-General, in its Treasury Board Secretariat, that included an interdepartmental committee to encourage quality and innovation initiatives in departments.[3] During the 2000s, the GoC externally subsidized private sector and university-based science and technology-oriented research and innovation in the private sector and universities and internally instructed its public servants to find innovative ways to save money, making loans available to departments do so. The predicted savings were written into each department's future budgets (the GoC did 3-year budgets). This innovation initiative was tied to specific economic and fiscal goals: expansion of the private sector and shrinkage of the public sector. The GoC invested in numerous industries; for example, most recently, artificial intelligence (AI). Its science and technology activities were combined into a new department, Innovation, Science and Economic Development Canada (ISED). Its current goals are to work with Canadians in all areas of the economy and in all parts of the country to

[2] I became aware of this initiative when I spoke to a UNESCO workshop on innovation, held in Moscow in 1999 and chaired by a Russian academic. I presented my patterns and the chair commented that the Russian approach was top-down. At the time, an election was being held. Vladimir Putin was running for President for the first time. When I asked my young, female guide how she was voting, she responded: "For Putin. Russia needs a strong leader."

[3] *The Innovation Journal* originated as a personal initiative, and was invited into this TBS initiative.

improve conditions for investment, enhance Canada's innovation performance, increase Canada's share of global trade and build a fair, efficient and competitive marketplace. Its approach is not free-wheeling but it announced in its 2025-26 budget that it was investing $85.3 million over five years in innovation, science and technology. One of its programs is Innovative Solutions Canada, that provides funding to corporations to innovate, create and get to market.

The Justin Trudeau GoC, 2014-25. created an innovation initiative led out of the Privy Council Office, the Prime Minister's department. It supported departments to be innovative and provided training through the substantial Impact and Innovation Unit (IIU) of 54 staff (https://impact.canada.ca/en/our-people), a specialized team that provides departments with expertise in advanced data analysis, social and behavioural sciences and partnership brokering. It sometimes embeds staff in departments. So far it has issued five annual reports, 2017-2018 to 2022-2023. It seeks to address major Canadian challenges, to close the implementation gap, enable systems-level change, enable innovation, and develop pathfinder projects (IIU, 2017-18). The key findings of its 5-year comprehensive assessment in 2022-23 were as follows:

- Impact Canada represents a unique and effective approach to solving the increasingly complex policy issues of the 21st century;
- It was on track to meet its strategic objectives and was well placed to lead and support policy priorities through the use of advanced policy research, behavioural science, and challenge-based methods as evidenced by its substantial positive impact on numerous critical policy spheres;
- Its Challenge Program continued to fill a gap in the Canadian innovation ecosystem, experiencing rapid growth from 2 challenge streams valued at $375 million to 30 active or completed outcomes-based funding projects valued over $735 million, spanning economic, environmental, and social policy domains;
- Built upon world-leading data-driven models of research, Impact Canada's portfolio of behavioural science (BeSci) projects informed the design and implementation of priority programs, services, and initiatives - understanding human behaviour and decision-making in a real-world context to support the implementation of key government priorities;
- Feedback from departments via key informant interviews and surveys overwhelmingly emphasized the importance of Impact Canada's support, with high demand and satisfaction for Impact Canada's Centre of Expertise, Fellowship program, resources, and portal;
- Impact Canada demonstrated strong accountability, value for dollar, and concrete results for Canadians; and
- Impact Canada is an effective approach that should be scaled up more broadly across government (IIU, 2022-23).

Corporations:

While the focus internal to the GoC was on problems and constraint, the emphasis in the GoC's science and technology policies and in the private sector was on expansion. One private sector participant in the Innovation Salon, a monthly dinner meeting and speaker, held monthly in Ottawa, Canada for ten years, was president of his small information technology corporation. He described the private sector approach to innovation as follows: "Innovation is what I say it is." He suggested this could include, for example, development of the next step for a technology

and sometimes, application of a new technology developed by someone else, such as the GoC National Research Council (NRC) or university researchers. Canada does excellent research but implementation of innovations is a problem. Compared to its biggest market, the USA (350 million population; 70 percent of Canadian exports), Canada is a small market of 40 million people, comparable in size to that of the USA State of California.

Problems implementing innovations could be due to such factors as lack of resources and management skills, the fact that the common objective of many small Canadian corporations is to be bought out by an American firm, or it could be the lack of a strong entrepreneurial culture. The Canadian economy is dominated by that of the USA and Canadian corporations are typically forced to become resources for American corporations.

Canada is said to lack innovation and that this is leading to low productivity. Productivity is typically enhanced by replacing people with machines. With substantial research, development, creativity and a well-educated population, the problem with innovation likely lies more with production, marketing at a scale that is profitable and its markets. Attempts have been made to enhance Canada's innovativeness. During the 1970s, for example, the Province of Alberta, under Premier Peter Lougheed, made substantial efforts to diversify its oil and gas industry. The province faced substantial resistance from USA governments, corporations and markets, and the effort largely failed. Alberta remains primarily a producer of natural resources, especially oil and gas, supplying stock, refining some but by no means all of it. Its top economic drivers consist of oil (mostly heavy oil), gas, and mining (16.4%), manufacturing (6.70%), transportation and utilities (6.60%), business services (11.8%), real estate (11.7%) and tourism (5.10%) (Wikipedia, 2025). From 2005 to 2024, oil sands production tripled. Canada doubled its oil and gas production from 1995 to 2004 (CAPP, 2024).

The GoC does not focus on innovation in the social sector. Rather, it sees the social sector as a cost item and has only sometimes been willing to consider its expansion, typically when a minority Liberal government is supported by the New Democratic Party (NDP) in Parliament, and the NDP and its predecessor, the CCF, have made their support conditional on expansionof social programs (e.g. public hospital and medical insurance, expansion of unemployment insurance, a school food program, dental insurance). The *Update on federal innovation policies and initiatives*, December 19, 2023, made mention only of the Department of Finance Canada; Innovation, Science and Economic Development Canada; and the National Research Council as involved in innovation. Historically, the GoC has seen innovation as largely a private sector, science, technology and business/industrial matter, not as a public sector matter.[4] Canada was a colony of the United Kingdom and only slowly grew to be more independent, beginning mainly in 1931. The impacts of colonialism continued to be felt, as Canada moved from being dependent on the UK to being dependent on the USA.

Critics. The C.D. Howe Institute, a right-wing Canadian think tank, criticized innovation policy in Canada, suggesting its own approach, that it called holistic (Schwanen, 2017). Addressing economic factors, it identified Canada as an innovation underachiever and suggested the public service be more innovative. It made no mention of management style or the inequality

[4] The dominant professional training among senior public servants is currently business administration.

in Canada that leaves many potential innovators behind. The Canadian Centre for Policy Alternatives, a left-wing non-partisan non-profit, has not addressed innovation as such.

Individual Motivation

Glor's (2001a, b) patterns of innovation consider individual motivation as either intrinsic or extrinsic. Intrinsic motivation is based on personal interests, goals and objectives. Extrinsic motivation is based on requests, instructions or demands external to the individual; for example, from management, elected officials or the market.

Intrinsic motivation is more effective than extrinsic motivation at inspiring creativity and innovation. Organizations have sought ways to induce intrinsic motivation in employees. Sometimes this is effective but often it is not. Organizations and management are typically satisfied with extrinsic motivation.

Motivation is not just a question of intrinsic or extrinsic origins. Individuals working on their own, on issues they consider important, usually only have their own time and resources to work with, possibly the help of some family or friends, if they are lucky. For example, a friend of my family spent years developing a new and better life jacket, but he was unable to get it onto the market. In a class society, in a society with much inequality, most people do not know anyone who might provide funding for good ideas. Public organizations and grant programs are typically not willing to support individuals and their ideas.

Magnitude of Challenge

The challenges of securing approval, resources and staff for (often) unproven ideas are considerable. Not all problems are solvable, especially given the constraints of external environments, political support and ideology, and resources and skills. Whether approval is given is substantially affected by politics and ideology.

Concerning ideology, it was interesting that the Government of Saskatchewan met strong, long-term resistance from American corporations when it sought to purchase their shares at market prices (this is not nationalization). The corporations followed up with successful court cases, that were supported by the Canadian federal government, and successfully lobbied to include clauses in free trade agreements between the USA and Canada that prevented such action in future. During the first year of his second term as USA president, Donald Trump did the same thing without resistance. Perhaps this could be attributed to the first action being that of a social democratic government while the second was that of a right-wing Republican government. Ideology-based challenges are not easy to overcome.

Securing resources and approval for innovation is very hard to achieve in a hostile political/ideological environment. It has also become difficult for innovations of ideologically different innovations to survive a change of government that is also a change of ideology. It depends to some extent, however, on the type of innovation involved and the politics of those in power. The fact that of the 183 identified innovations of the Saskatchewan government, created 1971 to 82, one-third (60) survived 50 years, through three changes of government that involved

major ideological changes. This suggests that termination of innovations is not decided only based on political/ideological grounds. It also suggests that subsequent governments sometimes decided that a number of innovations were not politically relevant, they either fit the new government's ideology or they were not particularly political.

Organizational culture, individual motivation and politics/ideology affect whether innovations are approved and whether they survive.

Types of Innovation

Based on a systematic literature review, Glor identified types of innovation. She developed a classification system for public policy innovations (2021a) that identified 594 antecedents, 508 of them unique, in 87 articles on trailblazing and adoption of innovation; compared antecedents of trailblazing and imitative adoption (11 grouped antecedents of trailblazing were importantly different from those of adoption) (2021b); compared the antecedents of different types of innovation (policy, private sector, public sector and social innovations) (2021c); compared the antecedents of trailblazing and adoption, quantitative and qualitative studies (trailblazing had different antecedents from the other three types studied; and identified the most important antecedents of trailblazing policy innovation as identified in the literature (external environment, drivers, obstacles [external] and people [internal]) (2021d). Politics was found to be more important in trailblazing than in adoption (Glor, 2021b). The literature indicates antecedents of trailblazing innovation are different from those of adoption of existing innovations. The antecedents identified in quantitative and qualitative studies were not different. Most of what is described as innovation in the literature is adoption of existing innovation.

To create a valuable innovation, possibly a new industry, requires not just a new idea but also its implementation. Moving to implementation requires many additional elements, including a model and business plan, a production platform, marketing, markets (customers) and a reputation for doing better.

Discussion

Unlike some private sector innovation, public sector innovation has not focused on utilizing individual creativity but rather on solving (typically immediate) institutional problems. There has been little response to individual creativity initiatives and little suggestion that employees had something substantial to offer their institutions, based on the individuals' choices. Of the examples provided, an exception was the Saskatchewan demonstration projects, that open-endedly sought suggestions from individuals, who in turn sought their managers' approval, then departments submitted the proposals to Treasury Board for funding. Because additional financial costs were provided by Treasury Board, and departments provided staff at their cost, there was an incentive for managers and departments to agree.

Little was open-ended about the provincial and federal initiatives, with the exception of Saskatchewan. The GoS approach was not foolproof, however. For example, six preventive health projects were funded were Saskatchewan Health. Of the six, three failed. One was a project to provide reproductive health information through public health nurses in a very conservative area of the province. It met with public resistance and was abolished. A second was proposed by a regional nutritionist who then went on educational leave. The project was moved to a different region where it eventually met with management resistance because the nutritional project was taking too much of the regional nutritionist's time. The third provided a health worker to a large Indian Reserve. The Reserve accepted the money but did not staff the position. It probably left too much to the Indian Reserve to do, without support. Capable health workers were not easily found on an Indian Reserve. The three successful projects were a large province-wide Child and Youth Safety Committee with representation from safety groups within the government, safety non-profits and Indigenous workers. The province saw a substantial reduction in child and youth accidental deaths, because of the focus it brought to the issue, including on Indian reserves. Another successful project was an active seniors' day program in a poor area of the City of Regina, run by volunteers. It tried, was initially successful, but did not in the long term continue to attract Indigenous seniors. The third project funded a pre- and post-natal program for pregnant, Indigenous women living in Regina, run by the Regina Native Women's Association. When the highly capable initiator left the program, a Regina non-profit trained several women to replace her, thereby providing a replacement and back-ups, which were needed. An evaluation form was completed with each of the 32 women who participated in the program, revealing that it was successful on several fronts, including weight gain. This program survived into the new neoliberal government by several years but was eventually eliminated during a cut-back exercise.

The 1990s GoC approach to its innovation initiative assured it was cost neutral at worst and saved money at best, by providing a loan but writing the predicted savings into its budget from day 1. This was not a strong incentive for departments, since they could not be certain it would work. If it did not, departments were required to absorb not just the costs but the estimated savings. The GoS initiative funded the demonstration projects with new, time-limited money, but controlled costs globally by approving the initiatives at the central level (Treasury Board).[5] The 1917-present GoC initiative provided some staff support and helped with access to money.

Conclusion

Governmental initiatives for innovation have taken on a number of characteristics:

1. The term innovation has been widely adopted but has often consisted of adopting others' innovations and has not involved much fundamental change.
2. Innovation has been used largely to serve conservative interests, such as restraining government budgets.
3. It has generally been conducted in a top-down manner to achieve organizational and managerial goals that have sometimes been harmful to employees (such as creating layoffs).

[5] In Canada, Treasury boards are Cabinet committees that approve departmental budgets.

4. Its rhetoric has been more obvious than its accomplishment as an objective.
5. Policy innovations have been more controversial than administrative innovations. Glor (2023), studying a full population of 183 innovations of a social democratic government, followed by a neoliberal government, found the termination rate for the policy innovations was 68.6 percent while the termination rate for administrative innovations was 50.0 percent, both over 50 years (Table 2).
6. Efforts to address social problems with innovative programs have often faced conservative political and concerned public resistance; e.g. programs to address fentanyl addiction by providing purer and less dangerous drugs through the health system. This was implemented in British Columbia, Canada. It met public resistance because it attracted homeless addicts to the neighbourhoods where services were offered, who often "hung around".
7. There has been limited willingness to offer innovations the space to try new things whose likely success was unknown.[6]

In other words, innovation has been used to reinforce political and managerial interests but not as much the interests of employees and possibly even the public.

Suggestions for Improvement

1. In the private and public sectors, governments, banks and other funders need to take more risks with loans for creation, development and implementation of innovations.
2. Governments need to take more risks with open-ended innovations, rather than tying funding to specific areas identified by management. This could apply as well to governments' support of private sector innovation by choosing open innovation rather than trying to pick winners.
3. Research funds (grants and loans) should be expanded and funding should be made available to more than universities. Funding could be made available to community colleges, non-profits, private corporations and individuals. Small grants should be available, as well as large ones.
4. Governments should give broader consideration to the antecedents and policies that create a good environment for innovation, recognize what makes innovators tick, promote the transition of ideas from the lab to the marketplace and understand that planning for innovation is better than reacting to catastrophes.

Management, elected officials and the public need to be engaged to accept failure as an opportunity for learning. Innovations are tests of new ideas, approaches, programs, services and projects. Progress can only occur systematically if governments are allowed to test new approaches to see if they work. Hesitating about change and only approving safe, verified innovations limits governments too much. This is difficult to achieve in environments of "gotcha" and ideologies that seek reduction of government at all times, at least the one oppositions do not agree with ideologically. While Peter Drucker (1980) said that 80 percent of innovations fail, he was writing about the private sector. Three of the six (50%) Saskatchewan

[6] Peters identified that 80 per cent of innovations in the private sector failed. In the first study that tracked the demography of innovations, Glor (2023) found that one-third of innovations survived 50 years in Saskatchewan.

Health pilot innovations failed, not because the projects themselves failed, though they may have if they had been allowed to be fully implemented, but because of resistance from the public, insufficient resources and lack of human resources, different reasons from one to another. Nevertheless, of the 183 Saskatchewan innovations, a surprising one-third survived 50 years. Sometimes new things are successful and do survive.

About the Author:

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References:

Canadian Association of Petroleum Producers (CAPP). 2024. Annual Canadian Total Hydrocarbon Production 1990 to 2024. Source: CAPP (1990-2017), Canada Energy Regulator and Provincial Regulators. https://www.capp.ca/wp-content/uploads/2023/12/Canadian-Oil-and-Gas-Production.pdf

Drucker, Peter. 1981. *Managing in Turbulent Times*. London, UK: Pan Books Ltd. in association with Heinemann Ltd.

Glor, Eleanor D. 2001a. Key Factors Influencing Innovation In Government. *The Innovation Journal: The Public Sector Innovation Journal*, 6(2), article 1. https://innovation.cc/all-issues/volume06-issue2/

____. 2001b. Innovation Patterns. *The Innovation Journal: The Public Sector Innovation Journal*, 6(3), article 2. https://innovation.cc/all-issues/volume06-issue3/

____. 2021a. A Nomenclature and Classification System for Antecedents of Public Policy Innovation Trailblazing and Adoption Derived from a Systematic Literature Review – III. *The Innovation Journal: The Public Sector Innovation Journal*, 26(2), article 4. https://innovation.cc/all-issues/volume26-issue2/

____. 2021b. Analysis of Antecedents of Trailblazing and Adoption of Public Policy Innovation Identified by a Systematic Literature Review– II, and Glossary. *The Innovation Journal: The*

Public Sector Innovation Journal, 26(2), article 3. https://innovation.cc/all-issues/volume26-issue2/

____. 2021c. A Comparison of Antecedents of Different Types of Innovation – V. *The Innovation Journal: The Public Sector Innovation Journal*, 26(2), article 6. https://innovation.cc/all-issues/volume26-issue2/

_____. 2021d. Conclusion: Important Antecedents of Public Sector Innovation – VI. *The Innovation Journal: The Public Sector Innovation Journal*, 26(2), article 7. https://innovation.cc/all-issues/volume26-issue2/

_____. 2023. Establishing a First Demography (Implementation, Fate) of 183 Public Innovations and Comparison of Policy and Administrative Innovation Demography to Normal Policy and Organization Demography. *The Innovation Journal: The Public Sector Innovation Journal*, 28(1), article 2. https://innovation.cc/all-issues/volume28-issue1/

Schwanen, Daniel. 2017. Innovation Policy in Canada: A Holistic Approach. Commentary No. 497. Toronto, Canada: C. D. Howe Institute.

Wikipedia. 2025. “Economy of Alberta”. https://en.wikipedia.org/wiki/Economy_of_Alberta#Current_overview