

Some Things We Have Learned about Public Innovation

Eleanor D. Glor

Editor-in-Chief

The Innovation Journal: The Public Sector Innovation
Journal

Fellow, McLaughlin College, York University, Toronto

Some Things We Have Learned about Public Innovation

Eleanor D. Glor

Introduction

A considerable literature has been published on public sector innovation, including much in *The Innovation Journal: The Public Sector Innovation Journal (TIJ)*, a journal devoted to the subject (see analysis in Glor, 2018). This paper summarizes and analyzes learning from this literature on public/government innovation and the topics that have been addressed and not addressed. Learning has been a focus within the field of public innovation; e.g., Brix (2017), Jaumotte and Pain (2005), Svava 2017).

Methodology

The author conducted a literature review of books and articles on public innovation/government innovation, using the University of Ottawa, Canada electronic library database. Although the system indicated individual pages of information could be saved, they could not. Consequently, a Google Scholar search was conducted of public innovation. Fourteen pages were reviewed, which translated into 32 pages in MsWord.

Findings

Learning that was identified from these sources included the following.

1. Definitions are Needed

The literature on innovation uses different definitions of innovation and sometimes does not define it; this is an important weakness in the innovation literature. Definitions of innovation, trailblazing innovation, dissemination/adoption and change should differ.

Everett Rogers (1995) identified five helpful, sequential, time-based stages of innovation dissemination/adoption. They were innovation (invention), early adoption, early majority, late majority and laggards. In his stages analysis, Rogers defined innovation as the first adoption of something new. However, Rogers defined innovation two ways—as invention and as anything defined as innovation by an observer. While in his stages analysis, Rogers showed innovation as invention, other authors believe that adoption at all of Rogers' stages is innovation (e.g., Schumpeter, 1942; OECD, 1998). The definition of innovation used in these latter cases is something like: Innovation is what is perceived as an innovation by the observer. This can be a subjective definition and, in fact, subjective definitions are often used in innovation research.

Once defined as an innovation, a change seems to remain an innovation forever. Rogers sometimes also treats it this way.

Glor (2021b, I) defined trailblazing innovation as Rogers' first two stages, invention and early adoption. More specifically than Rogers, she defined trailblazing innovation as the first three adoptions in a government's population.

Surveys (see later) treated all adoptions as innovations.

If, on the other hand, adoption at every one of Rogers' dissemination stages is not treated as innovation, as he suggested, then this question must be answered: At which stage does innovation become adoption/dissemination/change? In Glor's opinion, there is a stage where innovation becomes reform/adoption/dissemination/best practices/change; even later it becomes the usual way of doing things (becomes institutionalized). She suggested, as mentioned earlier, that the first two stages—invention and early adoption—is innovation. An innovation she considers something new to an organization.

2. Innovation has an Impact on Fate

Glor found normal programs/organizations and program/administrative innovations had different demography—policy/program innovation had a somewhat higher mortality rate than normal programs over thirty years. Administrative innovations had the same mortality rate as normal organizations over 50 years. Both program and administrative innovations were less likely to be terminated as they grew older (Table 1). What age Roger's stages correspond to is not known: he did not link his stages to any measures.

To distinguish and study early-stage adoption of innovations has some requirements; in particular, there must be a way to distinguish the stages, preferably empirically. Some innovation authors have done this. Collier and Messick (1975), for example, studied the first income security programs; Glor (1997, 2002, 2021b) studied early Saskatchewan adoptions of and their political community, ranking the innovations within the USA and Canadian context as first, second or third time adopted. Glor's research on the Saskatchewan government of 1971-82 defined innovations as the first three adoptions in the USA and Canada, calling it pioneering innovation.

This approach distinguishes innovation from change/policy transfer/reform (Glor, 2021a). These are terms for change used in the policy literature, which has shown some but limited interest in innovation. While the policy literature does not draw a strong difference between change and innovation, the innovation literature must and sometimes does (Glor, 2021a). Innovation has important differences from change, including newness, early adoption and the greater policy and administrative challenges involved in doing something for the first or the first, second and third time.

Table 1: Public Policy and Process Innovation and Normal Program and Organization Population Demography Compared

	Normal Populations		Government of Saskatchewan Populations				
	All USA Federal Govt Domestic Programs	Public Organizations	GoS Policy & Admin Innovns	GoS Admin Innovns	GoS Admin Innovns	GoS Policy Innovns	GoS Policy Innovns
Authors	Berry, Burden & Howell 2010	Glor 2011	Glor 2023	Glor 2023	Glor 2023	Glor 2023	Glor 2023
Time Period	1971-2003 32 yrs	1867-2010 49-58 yrs	1971-2021 43 – 50 yrs	1973-2003 30 yrs	1971-2021 50 yrs	1971-2001 30 yrs	1971-2021 50 yrs
Total Survivals	1075	1607	60	7	7	74	53
Total Termd	1055	2067	123	7	7	95	116
Total No.*	2130	10 public org. popns 3674 orgns	183	14	14	169	169
Termination Mean %/Yr	1.548	1.051	1.344	1.667	1.0	1.87	1.37

Source: Glor, 2023a, Table 2.

Abbreviations: Govt=government; Innovns=innovations; No.=number; Orgns=organizations; Progs=programs; survd=survived; Termd=terminated; T=total; yrs=years; %=percent.

3. Topics of Interest in the Public Innovation Literature Have Changed over Time

During the 1970s, new social programs and economic strategies were of particular interest (Ismael, 1985; Glor, 2022; Loreto, 2024); since the 1980s and ongoing,¹ restraint, privatization and other forms of NPM (Ismael and Vaillancourt, 1988; Dan, Lægheid and Špaček, 2024); 2010 to 2020, collaboration (see special issues of *The Innovation Journal (TIJ)*, 17(1), 18(2) 2013); during the 2020s, governance design (Torfing and Triantafillou, 2016), technologies (innovation systems, tools for innovators [design thinking], digitalization, big data and artificial intelligence). How to do and encourage innovation has been a consistent interest (Osborne and Brown, 2014) as have case studies (e.g. Gow, 1994). Authors were also interested in the dark side of innovation (Meijer and Thaens, 2021).

4. Innovations Exist in Most/Many Public Sector Fields

Glor personally developed four innovations, she studied 235 Canadian innovations (184 from Saskatchewan), 13 Canadian and Saskatchewan innovations in-depth (Glor, 2015, 2022), and facilitated 10 years of presentations on innovation in Ottawa, Canada, through the Innovation Salon. While documenting, analyzing and establishing the demographics of 184 Saskatchewan trailblazing innovations in twenty fields, she prepared a database, analyzed the innovations'

¹ “NPM ideas and practices continue to be adopted, used, and tailored to meet reform requirements and preferences, resulting in enduring forms of NPM” (Dan, Lægheid and Špaček, 2024: 1).

antecedents and demographics, and published the database (Glor, 2023d). Many case studies of innovation have been published internationally.

5. People Interested in Innovation

Interest in innovation started with science and business innovation, then focused on public innovation but the main focus has returned to business.

Joseph Schumpeter (1942) was an economist and competitor of John Maynard Keynes. Schumpeter was active from the 1910s to 1950. He is credited with beginning research on innovation, by which he meant business innovation. Hospers describes Schumpeter's thinking:

Schumpeter agrees with Marx that capitalism is an "evolutionary process". The economic system incessantly changes in historical time; firms and industries start up or die out, markets are opened up, new technologies are introduced and so on. According to Schumpeter, the main force that brings about this structural change is the "perennial gale of creative destruction" (Schumpeter, 1942). This process refers to the waves of innovative activity that hit the economic system in different points of time, resulting in the destruction of the old economic structure and the creation of a new one. Thus, Schumpeter (1918-19) sees the introduction of innovations, that is "the carrying out of new combinations" as the key process of economic change. He mentions various types of innovations: the introduction of new products, new methods of production and new forms of business organization as well as the penetration of new input—and output markets. Innovations are more than just small changes put together: "Add as many mail-coaches as you please, you will never get a railroad by so doing" (Schumpeter, 1940). Instead, for Schumpeter, innovations are "new combinations" (Hospers, 2005, p. 23).

Seymour Martin Lipset (1968), American sociologist and political scientist, wrote of the innovations of the Tommy Douglas Cooperative Commonwealth Federation (CCF) government of Saskatchewan. It was one of the first social-democratic governments in North America and introduced Canada's first hospital and medical insurance programs. The NDP government in Saskatchewan, 1971-82, actively grew the economy by developing resources, partly through Crown corporations, and generated sufficient revenue to introduce at least 184 innovations, most of them policy innovations, yet maintained a balanced budget throughout. Glor (2023d) identified the government's trailblazing innovations. During the period of cutbacks in the 1980s in Saskatchewan and the 1990s federally, interest in NPM innovations dominated study of innovations. Administrative process innovations have remained the dominant interest since then (Glor, 2021b, article 3). Presumably this interest is based on a belief that government costs too much to administer and that it could be made more efficient and money could be saved through privatization. The savings promised were generally not realized.

Some political scientists have shown interest in innovations. Only a few have shown consistent interest, such as Borins, Bernier, Gow and Glor.

6. Many Cases of Public Innovation have been Published: They are mostly descriptive

Much innovation literature has been devoted to case studies; currently, considerable interest is devoted to technological innovations.

a. ***Canadian, American and International Innovations.*** Glor published on Saskatchewan innovations (1997, 2000, 2002, 2021b) introduced 1971-82 and ***Canadian innovations*** (2015). She (1998) and Bernier, Hafsi and Deschamps (2015) studied ***Canadian innovations*** nominated for Institute of Public Administration of Canada (***IPAC Innovation Awards***) and Glor (2015) studied fifteen Canadian innovations in-depth. Sandford Borins (1998, 2008) examined American innovations nominated for the ***Harvard University Ford Innovation Awards***. Ford also funded ***international innovation awards*** in Brazil (Simões and Goulart, 2006; Farah and Spink, 2008), the Philippines, Brazil, Chile, China, East Africa, Mexico, Peru, South Africa, East Africa and Native American innovations (Spink and Brigagão, 2004; Farah and Spink, 2008). *TIJ* has published 61 case studies of public innovation.

b. ***Publin Project***, 1998-2002

The Publin (a combination of the words public and innovation) Project was European Union-funded. It developed case studies of 11 innovations in nine European countries. It defined innovation as “deliberate changes in behaviour with a specific objective in mind. Innovation is often problem solving” (Vigoda-Gadot, Shoham, Ruvio and Schwabsky, 2005: 1).

c. ***MEPIN (Measuring Public Innovation in the Nordic Countries) Project***

The MEPN project was OECD-sponsored research to develop measures of public innovation. The pilot was centred on the Nordic countries. It was not completed, although initial survey findings were published (Bloch and Bugge, 2013).

d. ***LIPSE Project (Learning from Innovation in Public Sector Environments)***, 2013-2016

LIPSE was a European Union-funded study that identified drivers and barriers of innovation. A project consortium focused on five building blocks of social innovation in the public sector: the innovation environment, the inputs and outputs of innovation, tools and processes, and systems of public innovation. The researchers were policy scholars (Bekkers, Tummers, Stuijzand and Voorberg, 2013).

There is interest in case studies. This helps those interested in innovating generally or in addressing specific problems.

7. Surveys of Adoption of Innovations

i. ***City Surveys***

British and American surveys of urban innovations have been conducted. In 2003, the International City/County Management Association (ICMA) began an annual survey of its members to determine how many reinventing practices their governments had adopted (Svara, 2017). The National Partnership for Reinventing Government (NPR) was a USA government reform initiative launched in 1993 by Vice President Al Gore, with a goal of making the federal government "work better, cost less, and get results Americans care about". The initial survey

listed 10 innovations but a later one listed 70+ of these mostly New Public Management (NPM) to choose from (Glor, 2001).

A similar survey of Danish local governments offered nine to choose from (Svara, 2017: 28-29). The Organization for Economic Cooperation and Development (OECD)'s innovation survey takes a similar approach.

These common survey approaches make it difficult, however, to distinguish innovations from best or even common administrative practices. It also performs a promotional function, acting as a way to encourage adoption of NPM innovations. Much of the literature on innovation is about NPM, and is focused internally on administrative processes. Study of public innovation has become intertwined with promotion of NPM.

ii. OECD Innovation Survey and Producing Innovation Index

The OECD Innovation Survey offers countries a model survey to assess their innovativeness. It uses an economic/business-oriented definition of innovation. Detailed guidance on how to conduct the survey is offered through the *Oslo Manual*. The first edition of the *Manual* was published in 1992, the 4th edition in 2018. It has thus been available for 32 years (1992 to 2024). The survey is based on whether innovations have been adopted by individual businesses (most small) and organizational units (including smallest units). Innovation is what is delivered; the survey asks whether an innovation has been adopted in an organization. The focus is thus dissemination/diffusion of innovation. The *Oslo Manual Guidelines for the collection and use of data on innovation activities in industry*, 3rd Edition was published November 10, 2005. Developing its measures took 15 years.

While this OECD initiative was developed to guide business innovation surveys, the *Oslo Manual 2018* definition of innovation, for the first time, defined innovation to include the economic aspects of the non-profit and public sectors, and policy and individual household innovation. No measures were defined for them, though the MEPIN project did some work on its measures. The focus is still diffusion of innovation in and across a company/organization.

The OECD only uses empirical references, though empirical studies are out of fashion in the scholarly world and is not being funded by research funding agencies. The *Oslo Manual* was prepared by statisticians. Public sector measures were developed for the pilot OECD-sponsored Measuring Public Innovation in the Nordic Countries (MEPIN) project (Gault, 2018; Windrum, 2008; Bloch and Bugge, 2013). The public sector taxonomy is also based on what the public sector delivers—service, service delivery (Osborne, 1998; OECD, 2018; Buchheim, Krieger & Arndt, 2020), administrative and organizational, conceptual, policy, systemic innovation (Windrum, 2008: 8; Buchheim, Krieger and Arndt, 2020). Measures are economic (Gault, 2020). The original private sector definitions were extended to the other sectors, plus policy and household innovation were added. Standards have not been published (Glor, 2021b, III)

By including the ranking of introduction of innovations in surveys, researchers could include questions that ask where, when, and by which organization innovations were introduced first, second, third. This could be added to all research on innovation. While not easy to

ascertain, without this information, study of innovation is ahistorical and focuses on promotion of innovation.

8. Comparison of case studies

A limited number of publications have compared case studies. This has been done by Glor (2023d). Svara (2017) and Glor have both recommended comparisons. Criadoa, Alcaide-Muñoz and Liarte (2023) recommended studying PSI in different contexts.

9. Researchers have taken numerous approaches to the study of innovation

Innovations have been studied based on a number of considerations.

New as Perceived by the Adopter. Some approaches have emphasized the newness of the innovation to the adopter or the organization adopting. The definition used is thus Innovation is anything perceived as new by the adopter or new to the organization, no matter how small. This is the approach taken, e.g., by Schumpeter (1942), Rogers (1995) and Cinar, Simms, Trott and Demircioglu (2024). While adopters may know the most about who else has adopted the innovation (it is certainly in their interest to research this issue), without confirming how much they know, this definition has the potential to be subjective. Adopters often have some knowledge about the order of adoption of the innovation they are adopting, though their knowledge may not be broad.

Newness of the Innovations. An innovation must be new in some substantial way. Glor (2023d) found that the newness of an innovation can be confirmed, with some research. To address newness, information provided by adopters is very useful but other sources must also be used when possible. Study of the newness of innovations has been based on a number of factors, including types of innovations. Conger (2002, 2003) classified innovation types as procedures, organizations and laws and in an historical study divided social innovations as: instrumental vs. organizational inventions, educational, social service, economic, governmental, psychological, voluntary organizations, legal, general social, and future social inventions.² Glor (1997, 2002, 2023d) emphasized trailblazing innovations in a population or community.

Some authors focused on timing of adoptions; e.g., Conger (2003), Collier and Messick (1975) and Glor (1997, 2000). Collier & Messick defined innovations as new within a geographic population (Europe), Rogers (1995) innovation adoption (dissemination). Rogers separated adoption by five stages: Early innovation research often focused on early adopters. Glor (2021 II, 2023a, b) focused on trailblazing innovations, the first three times an innovation was adopted in a government's population or community.³ Saskatchewan's population is the Canadian provinces; its community is Canadian provinces, the Canadian federal government, USA states and the USA federal government. Glor refined the first two stages of Rogers' adoption of innovation (known as innovation/invention and early adoption by Rogers and trailblazing by Glor). She defined the first three adoptions of an innovation in a government's

² Conger headed an early federally-funded innovation hub, Saskatchewan NewStart, that preceded the innovative Government of Saskatchewan, 1971-82.

³ She was not always able to identify the rank of innovations, but usually was.

community as trailblazing. Newness and innovation were described synonymously (2021, II). Glor (2021b) found that the antecedents of trailblazing were different from the antecedents of all adoptions, thus supporting the distinction. The literature has shown little interest in newness in recent years, possibly because there has been less invention/innovation, with financially constrained governments.

Countries in which the Innovation Occurred. Collier & Messick (1975) reported the countries that invented social income programs in Europe. Perhaps because their governments have generally been more left-wing than American and Canadian governments, *European studies of innovation* (Publin, MEPIN, LIPSE) detailed more recent European public innovations.

Everett Rogers, publishing on building theory of the innovation process, and Mario Rivera, publishing in *TIJ* on public sector innovation, contributed to the study of *American innovations*. Rogers and Rivera were colleagues at the University of New Mexico. Bill McKelvey (2007) argued that evolutionary theory is not the best approach for explaining entrepreneurship and organizational change dynamics, finding complexity theory a better approach.

Canadian contributors to study of innovation have included Sandford Borins (emeritus professor, University of Toronto), who examined case studies of USA innovation award nominees; James Iain Gow (emeritus University of Montreal), who studied theory of innovation (2014) and case studies of Canadian federal government administrative innovations; Luc Bernier (University of Ottawa), who studied IPAC's Canadian innovation award nominees and state-owned corporations. Patrik Marier (University of Montreal, Concordia University) (2013) and Glor (2022) studied the innovative Saskatchewan policies, programs and administration. Glor developed public health, IPAC innovation award, and national case study comparisons, and a database of 184 Saskatchewan innovations. She considered appropriate theories for the study of innovation (2002); modified Rogers' model of the innovation process (1998), identified internal governmental patterns of innovation (2001a, b), researched the antecedents of policy innovation through a systematic literature review (SLR), and identified a population of 184 Saskatchewan innovations, introduced 1971-82. From this, she developed a demography of innovations and compared their fate with those of normal organization and policy populations (2023a, b). Over 30 years, policy innovations had a higher mortality rate than normal policy populations; over 50 years, normal organizations and administrative innovations had similar mortality rates.

Innovation's Link with Political Ideology. While the country innovating has been of interest, innovation's connection with political ideology has not been emphasized in the literature, though it has been acknowledged by Glor (2021b, article 3). Left-wing changes have often been innovative but right-wing governments, especially far-right governments have emphasized abolishing those particular innovations. Their rhetoric has been one of cutting back government but their tax cuts and subsidies to and contracts with the private sector have tended to maintain or only slightly reduce budget deficits.

Theories. Some authors focused on the theories through which innovation was observed; e.g., two theories (functionalist/non-functional) (Pollitt, 2002: 481-2); four theories (interpretive, humanist, functionalist, structuralist (Glor, 2014) and four other theories (Gow,

2014). Glor developed theory, hypotheses, processes and evaluations. She identified types of innovation, developed a framework for study of public sector organizational culture, identified innovation cultures (top/down management culture, minor/major challenge, intrinsic/extrinsic motivation, a total of eight patterns). She also linked theory and practice by addressing the question: *Is innovation a question of will or circumstance?* (2002), which considered whether innovation should be addressed through the theory of determinism or voluntarism and in *A Gardener Innovator's Guide* (2006).

Gow (2014) examined the theoretical writings of Everett Rogers, Sandford Borins, Robert D. Behn and Eleanor D. Glor and the theoretical questions involved in (comparative) government practices, representing a variety of approaches/theories. He examined consensus and disagreements about the defining parameters of public sector innovation study and about the basic questions studies should address. Gow did not find much division concerning which people were innovative, the characteristics of successful innovations and the steps involved in innovation and diffusion. He found disagreements about the definition of innovation, including the issue of how big or disturbing an innovation must be to be taken seriously; the reference group for innovations; the case studies that should be considered as examples of innovation have expanded, thus creating shakier ground for the study of replication and diffusion; choices among (four) approaches to (theories of) innovation; results and outcomes; accountability; creativity; and context and process. He made particularly interesting arguments about how to address deregulation and privatization, and the abandonment of previous innovations no longer considered desirable.

Stages. Another topic of interest has been the stages of the innovation *implementation process* (Rogers, 1995). Glor modified Rogers' (1995) innovation process, to become readiness, negotiating approval, effective implementation, results and learning (Glor, 1998). Some authors considered the stages approach too linear. Other authors treated stages as stages of innovation *adoption* (e.g., early, laggard adoption) (Rogers, 1995; Glor, 1998).⁴

Antecedents of Innovation. A topic of considerable interest in the literature has been the context/antecedents of innovation; e.g., large/small organization, good/poor economy, left/right political ideology, types of politics, internal functioning (Glor, 2021, IV; 2023b). Demircioglu and Audretsch (2017) identified conditions for innovation in public sector organizations. Though this has not been emphasized, a focus on antecedents implies a hope that it is possible to create, through will including management, conditions that are likely to lead to public innovation, and that others could imitate. Glor (2023, VI) identified the antecedents of policy innovation most often described in the literature. Some authors felt open innovation enhanced public support (Jugend, Fiorini and Armellini, 2020).

Glor found it was possible to identify the major factors/antecedents influencing trailblazing innovation in Saskatchewan (2023b) and in Canada (2015) and that antecedents, surprisingly, predicted not only introduction but also fate of public innovations and their organizations (2022). Cinar, Trott and Simms (2019) conducted a SLR of barriers to the public

⁴ These two types of stages (processes, adoption) have sometimes been confused in the literature.

sector innovation process. Glor conducted a SLR of antecedents of policy innovation (Glor, 2021b, articles 2-7).

Based on her SLR of antecedents of public policy innovation (2021b), Glor found the literature identified a whopping 594 different terms for antecedents but that different terms often described similar phenomena. This revealed a lack of thorough research on and attention to what others had to say on the subject. She consequently developed a nomenclature and classification system for them and identified the most important antecedents, based on what was most-mentioned. The most-mentioned factors in external cluster of antecedents were external context, people (citizen pressure) and obstacles; in political cluster, drivers/demands, political context and political actors; in internal cluster, the innovation process, drivers and people. Twice as many grouped antecedents were identified for internal cluster than for political or external cluster. Based on number of mentions, the literature considered the internal cluster to be the most important. Considered as proportions of clusters, the results were different. This was a functional approach. Chen, Walker and Sawhney (2020) also developed a typology of public innovation.

Glor (2021b IV) found trailblazing innovations and innovation adoptions had different antecedents. She also discovered that different types of innovation had different antecedents (2021b V)—including private/public sector processes, process/policy innovation, and trailblazing/adoption of innovation.

Glor (2022) developed and employed an instrument to identify factors influencing the creation and fate of 10 income security innovations and their organizations in Saskatchewan. She verified the instrument and three raters, and employed the instrument to study the 10 innovations and organizations, a sub-population of Saskatchewan trailblazing innovations. These innovative income security programs were introduced during the 1970s when the full Saskatchewan welfare state was created (Marier, 2013).⁵

Glor's demography of innovation identified antecedents of 184 Saskatchewan innovations. She (2023d) published the database and antecedents (1st, 2nd, 3rd in government's community) innovations. She addressed whether and which antecedents identified in the SLR of policy antecedents applied to Saskatchewan (most of the 1970s Saskatchewan innovations were policy/program innovations), compared antecedents of the Saskatchewan innovations to antecedents of policy innovations, and identified best indicator antecedents (defined as most frequently mentioned) (Glor, 2021b, 2023a-d). Other authors took different perspectives on antecedents; e.g., De Silva, Howells, Khan and Meyer (2022) considered public innovation intermediaries and Cinar, Trott and Simms' (2019) SLR addressed barriers to the public sector innovation process.

Dominant interest is processes. By examining antecedents separately for the external environment, the political environment and the internal government environment of antecedents. Glor was able to ascertain that scholars have focused substantially more on internal antecedents than on external and political antecedents; in other words, authors were more interested in innovation processes (administration) than the more substantive external and political contexts.

⁵ Glor (2017a, appendices I-IV) published the questionnaire.

The numbers of antecedents identified were more similar when external and political contexts were combined and compared to process innovations. One process that has received considerable attention has been collaboration (e.g. Sørensen and Torfing, 2012; Ansell and Torfing, 2014). *The Innovation Journal* has published 33 items on collaboration.

How To. A topic of ongoing interest has been How to Do innovation; e.g., Ansell, 2012; Glor, 2006). Private sector consultants have been especially interested in this subject, and have published on it.

Technology. Another topic of much interest has been technological innovation; currently, topics of interest include living (innovation) labs (Tönurist, Kattel and Lember, 2017; Criado, Ferreira Dias, Sano, Rojas-Martín, Silvan and Filho, 2020), artificial intelligence (AI) (Väyrynen, Helander and Jalonen, 2023) and big data (Morabito and Morabito, 2015). Organizational tools have also been technologies of interest; e.g., networks (O’Toole, 1997; Bland, Bruk, Kim and Lee, 2010). There are a considerable number of scholars who address topical subjects and many journals and book publishers are also interested in topical subjects.

Innovative Governments invent/adopt many innovations. For example, in the 1880s Germany, under Bismark, a conservative, introduced the world’s first income security programs (Collier and Messick, 1975). The USA State of Minnesota was known for its innovations during the 1970s and the Canadian Province of Saskatchewan during the same decade (Glor, 1997, 2002, 2023d). According to the numbers of articles published recently in *TIJ*, Kazakhstan is a current innovative government.

It is Worthwhile to Evaluate Numerous Innovations and Compare Them; e.g., public health. Glor (2023d) documented 184⁶ trailblazing innovations (first three adoptions in USA, Canada) introduced by Government of Saskatchewan, 1971-82.

It is Possible to Create a Demography of Innovations. Glor (2015; 2023a, d) demonstrated it was possible to create a demography (of Saskatchewan innovations, 1971-82), and she did so, for the first time. She examined the dates of founding and fate of innovations, creating a 50-year demography of an innovation population of 184 innovations and investigated their antecedents. She examined some issues others did not emphasize, such as politics, ideology and government objectives for the innovations.

In Glor and Rivera (2017b), Glor developed hypotheses about the effect of innovation on organizational survival and mortality: Hypothesis 1: Innovations do not affect the survival of their organizations. Hypothesis 2: Innovations increase organizational survival and sustainability. Hypothesis 3: Innovations increase organizational mortality short-term and long-term. Hypothesis 4: Innovations increase organizational mortality short-term but reduce it long-term. They tested the hypotheses against the organizational population and innovation literature through a research synthesis and corresponding proposals. Glor (2023a) determined that Hypothesis 4 was true for the 184-innovation Saskatchewan population studied.

⁶ The reader may have noticed that the publications on this subject identify 183 Saskatchewan innovations while the number identified in appendices and in this paper is 184. This is because another innovation was found. Statistical analyses were conducted on 183.

She found public policy innovations had a demography different from that of normal policies and organizations over 30 years but that administrative innovations had a demography similar to the demography of organizations over 50 years. The number (14) of administrative innovations found in Saskatchewan was not sufficient, however, to be certain of this difference (Table 1). Glor identified the demography of a normal population, all Government of Canada departments (2011), based on Library of Parliament data; developed a demography of normal programs & organizations, from the literature; and identified the demography of 184 Saskatchewan trailblazing innovations. This demographic approach was structural. She identified the antecedents of creation and survival/termination of innovations and compared the demography of public policy and administrative *innovations* with normal policies and organizations (Table 1; summary in Glor [2021b, V]). Other authors are encouraged to do comparable research that could make more comparisons possible for other populations/communities/governments, innovations and organizational units.

Early Public Innovation Research Emphasized Policies/Programs, Most Current Public Innovation Literature Innovative Administration/Processes, Government's Role in Promoting Business and Adoption/Dissemination of Innovation. More recent policy literature tends not to study or to use the term innovation, employing instead terms such as adoption, change, policy transfer, and reform. Normal policies are much more available to study than trailblazing innovations/innovations, of which there are a limited number. Glor developed a model of patterns of the internal innovation process, describing eight patterns of innovation, based on: top down/bottom-up management, minor/major challenge, intrinsic/extrinsic motivation) (Glor, 2001a, b). Management of innovation is of major interest; e.g., Berry (1994); Fuglsang and Sørensen (2011). Within management, creativity has attracted interest (Glor, 1998; Windrum, 2008).

Conclusion

Learning about public innovation can be summarized as follows.

1. Innovation, trailblazing innovation and adoption/dissemination of innovation are different from each other and innovation is different from change/reform/dissemination.
2. An innovative government invents/adopts many innovations.
3. Topics of interest have changed. Interest in innovation started with business innovation, the definitions were transferred to public innovation. Scholarly interest initially ignored public innovation, such as the innovations of the CCF party in Saskatchewan, initially elected in 1944, then addressed it for some time. The dominant interest in innovation has now largely returned to business operations and science,
4. Innovations exist in many public sector fields.
5. Many cases of public innovation have been published; they are mostly descriptive.
6. There are numerous approaches to the study of innovation.
7. Learning can be created by evaluating numerous innovations and their dissemination and by comparing case studies.

8. There has been considerable interest in antecedents of innovation. It was possible to identify the major factors/antecedents preceding introduction of and fate of policy innovation and trailblazing innovation and a population of public innovations.
9. The demography of public policy and administration innovations was different from the demography of normal policies and organizations, which were used as a proxy for administration, for 30 years. Organizations and administrative innovations had a similar demography, although only a few (14) administrative innovations were studied. After 50 years, the demography of normal organization populations and policy and administration innovations were similar.
10. Early public innovation research emphasized policies/programs. Most current public sector literature is focuses on innovative administration/processes, NPM and government's role in promoting business.

If other authors collected demographic information too, comparable work could be created for other populations/communities/governments, innovations, organization units. Most of the current innovation literature is on processes such as collaboration and technology.

As for the future, more work is needed on the differences between invention, trailblazing, innovation dissemination and change (Brown and Osborne, 2012). An unexamined issue is whether what we have learned about public innovation amounts to the beginnings of or is at least a foundation for a field and theory of public innovation. Based on a SLR, Criado, Alcaide-Muñoz and Liarte (2023) recommend focusing future research on (1) studying PSI in different contexts, (2) expanding the analysis of configurations in PSI initiatives, and (3) analysing ambidextrous strategies to support the practical implementation of PSI.

Public innovation theory is also needed to support development of a field of public innovation. Some work has been done to build it; e.g., De Vries, Bekkers and Tummers (2015) and Glor and Rivera (2017b) on a future research agenda; Glor (2015) on building theory of organizational innovation, change, fitness and survival; Criado, Alcaide-Muñoz and Liarte (2023) on building an analytic framework, based on an SLR.

References:

Ansell, Christopher. 2012. Stewards, mediators, and catalysts: Toward a model of collaborative leadership. *TIJ*, 17(1), article 7.

Ansell, Christopher and Jacob Torfing. *Public Innovation Through Collaboration and Design*. London, UK and New York, NY: Routledge.

Bernier, Luc, Taïeb Hafsi & Carl Deschamps. 2015. Environmental Determinants of Public Sector Innovation: A study of innovation awards in Canada. *Public Management Review*, 17(6): 834-856.

Bekkers, V.J.J.M., L.G. Tummers, B.G. Stuijzand and W. Voorberg. 2013. Social Innovation in the Public Sector: An integrative framework. LIPSE Working papers no. 1. Rotterdam, Netherlands: Erasmus University Rotterdam.

Berry, Frances S. 1994. Innovation in public management: The adoption of strategic planning. *Public Administration Review*, 54(4): 322-330.

Bland, Travis, Boris Bruk, Dongshin Kim, and Kimberly Taylor Lee. 2010. Enhancing public sector innovation: Examining the network-innovation relationship. *TIJ*, 15(3), article 3. innovation.cc

Bloch, Carter & Markus M. Bugge. 2013. Public sector innovation—From theory to measurement. *Structural Change and Economic Dynamics*, 27(December): 133–145.

Borins, Sandford. 1998. *Innovating with Integrity: How local heroes are transforming American government*. Washington, D.C.: Georgetown University Press.

Brix, Jacob. 2017. Exploring knowledge creation processes as a source of organizational learning: A longitudinal case study of a public innovation project. *Scandinavian Journal of Management*, 33: 113–127.

_____. (Ed.). 2008. *Innovations in government: Research, Recognition, and Replication*. Cambridge, Mass.: Harvard University and Washington, D.C.: Brookings Institution Press.

organizations. Milton Park, UK: Routledge.

Buchheim, Laurin, Alexander Krieger & Sarah Arndt. 2020. Innovation Types in Public Sector Organizations: A Systematic Review of the Literature. *Management Review Quarterly*, 70: 509-533.

Chen, Jiyao, Richard M. Walker & Mohanbir Sawhney. 2020. Public service innovation: a typology. *Public Management Review*, 22(11): 1674-1695.

Cinar, Emre, Paul Trott and Christopher Simms. 2019. A systematic review of barriers to public sector innovation process. *Public Management Review*, 21(2): 264–290.
<https://doi.org/10.1080/14719037.2018.1473477>

_____, Christopher Simms, Paul Trott & Mehmet Akif Demircioglu. 2024. Public sector innovation in context: A comparative study of innovation types. *Public Management Review*, 26:1: 265-292. DOI: 10.1080/14719037.2022.2080860.

Conger, Stuart. 2002. *Social Inventions*. *The Innovation Journal: The Public Sector Innovation Journal (TIJ)*, 7(1), article 1.

Conger, Stuart. 2003. *Social Inventions*, *TIJ*, 8(2), article 7.

- Criado, J. Ignacio, Laura Alcaide-Muñoz & Irene Liarte. 2023. Two decades of public sector innovation: building an analytical framework from a systematic literature review of types, strategies, conditions, and results. *Public Management Review*, 07 Sep <https://doi.org/10.1080/14719037.2023.2254310>
- Criado, J. Ignacio, Thiago Ferreira Dias, Hironobu Sano, Francisco Rojas-Martín, Aitor Silvan & Antônio Isidro Filho. 2020. Public Innovation and Living Labs in Action: A Comparative Analysis in post-New Public Management Contexts. *International Journal of Public Administration*: 1-14. <https://doi.org/10.1080/01900692.2020.1729181>
- Dan, Sorin, Per Lægreid and David Špaček. 2024. NPM reconsidered: towards the study of enduring forms of NPM. *Public Management Review*, 26(9): 1-11. <https://doi.org/10.1080/14719037.2024.2375561>
- Demircioglu, Mehmet Akif & David B. Audretsch. 2017. Conditions for innovation in public sector organizations. *Research Policy*, 46(9) November: 1681-1691.
- De Silva, Muthu, Jeremy Howells, Zaheer Khan & Martin Meyer. 2022. Innovation ambidexterity and public innovation Intermediaries: The mediating role of capabilities. *Journal of Business Research*, 149(October): 14-29.
- De Vries, Hanna, V. J. J. M. Bekkers & Lars Tummars. 2015. Innovation in the Public Sector: A Systematic Review and Future Research Agenda. *SSRN Electronic Journal*, <https://ssrn.com/abstract=2638618> or DOI: 10.2139/ssrn.2638618
- Farah, Marta Ferreira Santos and Peter Spink. 2008. Subnational Government Innovation in a Comparative Perspective: Brazil. Sanford Borins (Ed.), *Innovations in Government: Research, Recognition, and Replication*. Cambridge, Mass.: Harvard University and Washington, D.C.: Brookings Institution Press.
- Fuglsang, Lars & Flemming Sørensen. 2011. The balance between bricolage and innovation: Management dilemmas in sustainable public innovation. *The Service Industries Journal*, 31(4): 581-595.
- Glor, Eleanor D. (Ed.).1997. *Policy Innovation in the Saskatchewan Public Sector, 1971-82*. Toronto, Canada: Captus Press.
- _____. 1998. What Do We Know About Enhancing Creativity and Innovation? A Review of Literature. *The Innovation Journal: The Public Sector Innovation Journal (TIJ)*, 3(1), article 2.
- _____. 1998, "Public Sector Innovation in Canada," Pp. 300-340 in Randy Hoffman, Diane Jurkowski, Victor MacKinnon, Janice Nicholson, James Simeon (eds). *Public Administration: Canadian Materials*, Third Edition, Toronto: Captus Press.
- _____. 2000. Canadian Food Inspection Agency (CFIA). *TIJ*, 5(1), article 2.

- _____. 2001. Has Canada Adopted the New Public Management? *Public Management Review*, 3(1): 122-130.
- _____. 2001a. Key Factors Influencing Innovation in Government. *TIJ*, 6(2), article 1.
- _____. 2001b. Innovation Patterns. *TIJ*, 6(3), article 2.
- _____ (Ed.). 2002. *Is Innovation a Question of Will or Circumstance?* Ottawa, Canada: The Innovation Journal. <https://www.innovation.cc/books.htm>
- _____. 2006. *A Gardener Innovator's Guide to Innovating in Organizations*. Ottawa, Canada: The Innovation Journal. <https://www.innovation.cc/books.htm>
- _____. 2011. Patterns of Canadian Departmental Survival. *Canadian Public Administration*, 54(4) December: 551-566.
- _____. 2014. Studying the Impact of Innovation on Organizations, Organizational Populations and Organizational Communities: A Framework for Research. *TIJ*, 19(3), article 1. <https://www.innovation.cc/all-issues.htm>
- _____. 2015. *Building Theory of Organizational Innovation, Change, Fitness and Survival*, Ottawa, Canada: The Innovation Journal: The Public Sector Innovation Journal, 20(2), article 4 <https://www.innovation.cc/books.htm>
- _____. 2017a. Studying Factors Affecting Creation and Fate of Innovations and their Organizations – I: A New Instrument Appendix I Appendix II Appendix III Appendix IV. *TIJ*, 22(2), article 1.
- _____ and Mario A. Rivera. 2017b. Innovation and Organizational Survival Research. Chapter 3, pp. 40-75 in James D. Ward (Ed.), *Leadership and Change in Public Sector Organizations*. New York, NY: Routledge.
- _____. 2018. Introduction. Pp. 1-19 in Eleanor D. Glor (Ed.), *Leading Edge Research in Public Sector Innovation: Structure, Dynamics, Values and Outcomes*. Oxford, UK: Peter Lang.
- _____. 2021a. Defining, Distinguishing and Studying Public Sector Innovation and Change. *TIJ*, 26(3), article 4.
- _____. 2021b. Seven articles on a Systematic Literature Review of Public Policy Innovation Antecedents of policy innovation. *TIJ*, 26(2), articles 2-7. <https://innovation.cc/all-issues/volume26-issue2/>
- _____. 2022. *Antecedents Predict Introduction and Fate of Public Innovations and their Organizations: A Quantitative Analysis of Antecedents of Ten Income Security Innovations and Organizations, Saskatchewan, 1971-2021*. Ottawa, Canada: The Innovation Journal. <https://innovation.cc/document-library/books/>

_____. 2023a. Establishing a First Demography (Implementation, Fate) of 183 Public Innovations and Comparison of Policy and Administrative Innovation Demography to Normal Policy and Organization Demography. *TIJ*, 28(1), article 2.

_____. 2023b. Antecedents of Implementation and Fate of a Public Innovation Population of 183 Government of Saskatchewan Innovations, 1971-2021. *TIJ*, 28(1), article 3

_____. 2023c. Comparison of Major Grouped Antecedents of Public Policy Innovation Implementation Identified in a Systematic Literature Review to a Public 183-Innovation Population. *TIJ*, 28(1), article 4.

_____. 2023d. Database: Government of Saskatchewan Innovations Implemented 1971-82, Fate 1971-2021, Analyzed by Ten Factors. *TIJ*, 28(1), article 5.

_____ and Mario Rivera. 2017. "Innovation and Organizational Survival Research." Pp. 40-75, Chapter 3, in James D. Ward (Ed.). *Leadership and Change in Public Sector Organizations: Beyond Reform*. Milton Park, Abingdon, Oxfordshire, UK: Routledge.

Gow, James Iain. 1994. *Learning from Others: Administrative Innovations Among Canadian Governments*. Toronto, Canada: The Institute of Public Administration of Canada.

_____. 2014. Public Sector Innovation Theory Revisited. *The Innovation Journal: The Public Sector Innovation Journal*, 19(2), article 1.

Hospers, Gert-Jan. 2005. Joseph Schumpeter and His Legacy in Innovation Studies. *Knowledge, Technology, & Policy*, 18(3) Fall: 20-37.

Ismael, Jacqueline S. 1985. *Canadian Social Welfare Policy. Federal and Provincial Dimensions*. Toronto, Canada: The Institute of Public Administration of Canada.

_____ and Yves Vaillancourt (eds). 1988. *Privatization and Provincial Social Services in Canada. Policy, Administration and Service Delivery*. Edmonton, Canada: The University of Alberta Press.

Jaumotte, Florence and Nigel Pain. 2005. An overview of public policies to support innovation, OECD Economics Department Working Paper No. 456. Paris, France: OECD. [oecd-ilibrary.org. doi: https://dx.doi.org/10.1787/707375561288](https://dx.doi.org/10.1787/707375561288)

Jugend, Daniel, Paula De Camargo Fiorini & Aline Gabriela Ferrari. 2020. Public support for innovation: A systematic review of the literature and implications for open innovation. *Technological Forecasting and Social Change*, 156 July: 119985.

Lipset, Seymour Martin. 1968. *Agrarian Socialism: The Cooperative Commonwealth Federation in Saskatchewan: A Study in Political Sociology*. New York, NY: Anchor Books. Original from the University of California.

Loreto, Nora. 2024. *The Social Safety Net*. Toronto, Canada: Dundurn Press.

Marier, Patrik. 2013. A Swedish Welfare State in North America? The Creation and Expansion of the Saskatchewan Welfare State, 1944–1982. *The Journal of Policy History*, 25(4): 614-637.

McKelvey, Bill. 2007. Complexity science as order-creation science: New theory, new method. *Emergence: Complexity & Organization (ECO)*, 6(4).

Meijer, Albert & Marcel Thaens, M. 2021. The dark side of public innovation. *Public Performance & Management*, 44(1): 136–154. <https://doi.org/10.1080/15309576.2020.1782954>

Morabito, Vincenzo. 2015. Big Data and Analytics for Government Innovation. Pp. 23-45 in • Demirbaga, Ümit, Gagangeet Singh Aujla, Anish Jindal and Oğuzhan Kalyon 2024. *Big Data and Analytics: Theory, Techniques, Platforms, and Applications*. London, UK: Springer, Cham. https://doi.org/10.1007/978-3-319-10665-6_2

OECD/Eurostat. 2018. *Oslo Manual 2018. Guidelines for Collecting, Reporting and Using Data on Innovation, 4th edition. The Measurement of Scientific, Technological and Innovation Activities*. Paris, France; Eurostat, Luxembourg: OECD Publishing. Collected June 26, 2024 at: <https://www.oecd.org/science/oslo-manual-2018-9789264304604-en.htm>

O'Toole Jr, L. J. 1997. Implementing public innovations in network settings. *Administration & Society*, 29(2): 115-138.

Osborne, Stephen P. and Louise Brown (eds). 2013. *Handbook of Innovation in Public Services*. Cheltenham and Camberley, UK: Edward Elgar.

Pollitt, C. 2002. Clarifying Convergence. *Public Management Review*, 4(1): 471-492. <https://doi.org/10.1080/14616670110071847>

Rogers, Everett M. 1995. *Diffusion of Innovations*. 4th edition. New York, NY: Free Press.

Schumpeter, Joseph A. 1918-19. *Die Krise des Steuerstaates*. Leipzig, Germany: Leuschner & Lubensky.

_____. 1940. The Influence of Protective Tariffs on the Industrial Development of the United States. *Proceedings of the Academy of Political Science*, 2(7).

_____. 1942/1976. *Capitalism, Socialism and Democracy*. New York, NY: George Allen and Unwin.

Simões, Armando A. & Orosinda Maria Taranto Goulart. 2006. Brazil's National Award for Innovation in Education Management: An Incentive for Local Education Authorities to Improve Municipal Education Systems toward the Goals of the National Education Plan. *TIJ*, 11(3), article 6.

Spink, Peter & Jacqueline Brigagão (eds). 2004. Innovations in Government from around the World. The most recent awards winners from the Ford Foundation sponsored Innovations Programs in Brazil, Chile, China, East Africa, Mexico, Native America, Peru, Philippines, South Africa and the United States of America. *Cadernos GestÃO Publica e Cidadania*, 9(41): 1-70. ISSN 1806-2261.

Sørensen, Eva. Measuring the accountability of collaborative innovation. *TIJ*, 17(1), 2012, article 9.

Sørensen, Eva & Jacob Torfing, Introduction: Collaborative innovation in the public sector. *TIJ*, 17(1), 2012, article 1.

Svara, James H. 2017. Reinventing and Redesigning Local Government. Chapter 2, pp. 17-39 in James D. Ward (Ed.), *Leadership and Change in Public Sector Organizations*. New York, NY: Routledge.

Tõnurist, Piret, Rainer Kattel & Veiko Lember. 2017. Innovation labs in the public sector: what they are and what they do? *Public Management Review*, 19(10): 1455-1479.

Torfing, Jacob and Peter Triantafyllou, eds. 2016. *Enhancing Public Innovation by Transforming Public Governance*. Cambridge, UK: Cambridge University Press.

Väyrynen, Hannele, Nina Helander and Harri Jalonen (eds). 2023. *Public Innovation and Digital Transformation*. N.Y., NY: Routledge.

Windrum, Paul & Manuel García-Goñi. 2008. A neo-Schumpeterian model of health services innovation. *Research Policy*, 37: 649–672.

Windrum, Paul. 2008. Innovation and Entrepreneurship in Public Services. Chapter 1 in Paul Windrum and Per Koch (eds), *Innovation in Public Sector Services*. Cheltenham and Camberley, UK: Edward Elgar Publishing.