Movers and Shakers of Canadian Innovation Policy – Recognizing the Influence of University Vice-Presidents as Policy Advocates

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Abstract

This paper examines the influence and impact of university Vice Presidents (VPs) Research on coordinating Canada's innovation policy. As universities have become increasingly entrepreneurial, the institutional responsibilities go beyond policy implementation and have shifted towards shaping national level policy debates. By utilizing multi-level governance framework, the paper demonstrates how non-governmental stakeholders navigate the multi-level, multi-actor and multi-issue landscape of innovation policy. The findings provide evidence on the role of VPs Research in advocating and mediating complex inter-jurisdictional relationships between the private sector, and the federal and provincial governments. Policy coordination is viewed as an issue-driven functional process that assumes individual learning capacity and is influenced by the interdependence of stakeholder interests.

Key words: vice presidents, policy coordination, innovation policy, Canada, university leadership

Introduction

The problems of policy coordination in multi-sector and multi-actor contexts of innovation and research policy have been widely recognized (Braun 2008; Edler and Kuhlman 2008; Peters 2015; Tamtik 2016). The traditional view of policy coordination emphasizes the capacity of a government to provide political vision and create coherency across actors for systemic approaches regarding innovation policy (Boston 1992; Koch 2008; Borrás and Radaelli 2010). Yet increasingly the approach that recognizes the growing influence of non-governmental stakeholders in the design, implementation, and/or evaluation of policy processes has become apparent (Gornitzka and Maassen 2000; Börzel and Heard-Lauréote 2009). Supra-national organizations, regional stakeholders, organizations and influential individuals can play an important role in shaping innovation policy and impacting the dynamics of policy coordination (Kitagawa and Lightowler 2013; Vitola 2014).

Research universities are often viewed as influential knowledge producers, actors that play a pivotal role in implementing innovation policy (Dill and Van Vught 2010). Literature suggests that with the emphasis on knowledge economies, universities as institutions have changed fundamentally, becoming more entrepreneurial and developing an active role in innovation policy (Bramwell, Hepburn and Wolfe 2012; Audretsch 2014; Guerrero et al. 2016). Increasing evidence demonstrates that universities are taking a pro-active approach in coordinating innovation initiatives by initiating industry partnerships, creating regional innovation networks and building social capital through

intermediary activities (Kitagawa 2004, Yusuf 2008, Hayter 2016). Through its research projects and by providing recommendations universities contribute to policy development at all levels of government (Breznitz and Feldman 2012).

While there is a significant body of knowledge on how universities as organizations perform as critical intermediaries in facilitating knowledge production (Bramwell and Wolfe 2008; Ankrah et al 2013), there is limited recognition of the individual roles of top administrators within university leadership, that largely drive those processes. Higher education institutions are not uniform static entities but are influenced by the strategic decisions and activities of the individuals who hold leadership roles in the organization. University presidents have a crucial role in facilitating entrepreneurship activities in the institution (Thorp and Goldstein 2013). Vice presidents, deans and associate deans make decisions through institutional strategic planning processes, policy design and facilitation of broader directions of research enterprise (Sá and Tamtik 2012). Most universities have appointed provosts, vice-rectors or vice-presidents research for focused engagement with institutional innovation initiatives (Hazelkorn 2016). As such, university top administrators have become important stakeholders in innovation policy whose responsibilities go beyond policy implementation but have shifted towards influencing and shaping national level policy debates, through the processes of policy coordination.

Several scholars have pointed to the lack of research and attention on individual level constructs and mechanisms of knowledge sharing (Foss et al 2010, Chou 2016). There is significant research addressing the activities of management in the university technology transfer offices (e.g. Robertson and Kitagawa 2011; O'kane et al 2015; Weckowska 2015) but overall, there is limited literature available on the interactions of university top administrators in regards to innovation policy. More detailed knowledge would allow us to understand better the dynamics of policy coordination and examine further the growing influence of non-governmental stakeholders in shaping policy processes. Considering the multi-level and multi-actor complexity of innovation policy, it is important to understand the strategies and mechanisms that facilitate a system approach to innovation and support the creation of collaborative networks that can lead to strengthened innovation capacity.

This paper focuses specifically on the involvement and experiences of Vice Presidents Research within the context of Canadian research and innovation policy. The following research questions guide the study – What is the nature and dynamic that characterizes the work of Vice Presidents Research in regards to innovation policy? What strategies are being used to coordinate the complex activities of Canadian innovation policy?

Canadian Context

Canadian innovation policy is decentralized in nature. While the federal government has an overall responsibility for Canada's economic competitiveness and social well-being, the higher education sector, including its research universities, is regulated and governed by the provincial governments. Scholars suggest that the federal–provincial divide of inter-jurisdictional responsibilities is a major obstacle to policy coordination (Niosi 2000; Salazar and Holbrook 2007). Authors suggest that this fragmentation has contributed to

low innovation capacity in Canada (Creutzberg 2011, Sharaput 2012, Conference Board of Canada 2013). Knowledge producers, such as universities, must confront those conflicting priorities in governments' innovation policies when navigating institutional research agendas.

Canada has experimented with more centralized coordination practices between the 1960s and 1980s and more decentralized, network-based forms of coordination from the 1990s onwards (Clowater 2012; Atkinson-Grosjean 2002). Driven by the idea that innovation often emerges unexpectedly through non-linear networked ways, the federal government has reduced its political control and adopted the role of a facilitator and a supporter of innovation initiatives (Salazar and Holbrook 2007). The focus has been on supporting local and regional university-industry connections through policy and practice (Bramwell, Hepburn and Wolfe 2012). Federal innovation strategy 'Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation' (2014) is the most recent document that guides the federal vision for innovation in Canada. The emphasis is primarily on business-led innovation initiatives (Government of Canada, 2014). Steps have been taken to increase research funding that individual researchers and universities can apply through Tri-council granting agencies (Doern 2007). Such an indirect steering approach has made the importance of lobbying for resources and favorable funding conditions crucial, triggering the active participation of university leaders in governmental policy discussions.

In 2016, the newly elected federal government announced its goal to build Canada into a 'centre of global innovation', by implementing a renewed innovation approach that aims to integrate the non-governmental stakeholder voices into innovation policy. With the help and input from the 'Innovation Leaders' – stakeholders from the business community to universities and colleges, the not-for-profit sector, social entrepreneurs and indigenous business leaders - a 'whole-of-government' approach to innovation is the aim for Canada (Government of Canada 2016). Such a focus sets the stage for an increased role for university leaders (non-governmental stakeholders) in having an impact on national scale policy-discussions in innovation policy.

Ontario is the largest province with the most industrial and university-based research activity in Canada (Fallis 2013). The provincial innovation agenda has been divided between several ministries with major roles for the Ministry of Research and Innovation (created in 2013), Ministry of Economic Development and Growth; and the Ministry of Advanced Education and Skills which primarily focuses on post-secondary education. As the provincial government has developed its own innovation strategies and funding schemes for university researchers (e.g. Ontario Research Fund: Research Excellence & Research Infrastructure; Early Researchers Award; International Research Projects), the interest from the university sector to collaborate with the Ontario provincial government has increased.

Within the organizational structure of the Canadian post-secondary education sector, Vice Presidents Research (VPs Research) are top level administrators whose primary role is to develop and strengthen a university's research capacity. There is some diversity in

defining the leadership roles related to research. Most VPs Research have the official title of 'Vice-President Research' (e.g. McMaster, Waterloo, Western, Guelph, Ottawa), while in a few cases the role is defined in broader terms as 'Vice-Presidents Research and Innovation' (e.g. York, Ryerson, Toronto) indicating the clear emphasis on innovation. One institution (Carleton) has integrated the international relations into the responsibilities by having the positions of 'VP Research and International'. According to institutional websites, VPs Research typically work with industry partners, government leaders, granting councils and other research institutions to create a dynamic and stimulating environment for institutional research. He/she establishes priorities, policies and practices that attract and retain outstanding researchers at the university. He/she is also responsible for developing and implementing institutional strategic research plans that define the vision, priorities and research directions for the institution. As such this role is particularly complex and demanding and requires good communication skills that allow for easier navigation of the multifaceted landscape of the innovation agenda.

Theoretical Perspectives

Policy coordination is often viewed as a key aspect of effectively managing an innovation system. According to Borrás (2009, p. 13) policy coordination in innovation policy is 'an ability of governmental action to transform the institutional framework in such a way that it brings together and organizes coherently the interactions of the actors in the system so that innovation performance improves'. The role is complicated as the number of policy sectors and actors in the system is escalating. Innovation policy typically expands over traditional sectorial boundaries of different ministries (e.g. education, research, industry/economy, health, defense, environment, immigration). It involves actors from the whole system: firms (the production structure); universities, research institutes, educational and training organizations (the knowledge infrastructure); and public and private networking and policy actors and intermediaries (the support structure) (Nilsson and Moodysson 2015). Considering the diversity of stakeholder groups, policy coordination between actors becomes an increasingly challenging task.

As innovation policy is negotiated under the conditions of multi-level, multi-actor and multi-issue contexts (Kuhlman, Shapira and Smith 2010), a multi-level governance theory is suitable to investigate the dynamics of policy coordination. Marks (1993, p. 392) defines multi-level governance as 'a system of continuous negotiation among nested governments at several territorial tiers', emphasizing complexity among stakeholders and ongoing dialogue in the process. According to this theory, governance processes are seen as negotiated relationships where traditional decision-making competencies are contested and shared among participants. The core aspects that characterize multi-level governance approach are: 1) the authority of collective decision-making; 2) interdependence among stakeholders; and 3) mutual learning processes (Hooghe and Marks 2001; Börzel and Heard-Lauréote 2009; Zito 2015). These will be explored below.

Sikkink (2005) argues that this 'multi-level' interaction among groups provides opportunities for local actors (e.g. universities) to seek out allies beyond the central authority to pursue their interests. Such coalitions are useful in order to carry out

domestic agendas for political change. As a result of collective decision-making local actors (e.g. VPs Research) and non-governmental networks (e.g. university associations and networks) have the capacity to influence governmental policies. Jessop (2004) suggests that the driving factor in state and non-state actors on different levels coming together for collective decision-making is the existence of functional problems. Policy coordination then becomes the process of addressing those shared problems that challenge achieving organizational interests. Capano (2015) affirms that government still has a prime responsibility in the process. He notes that while government leaves policy actors enough freedom to choose how to achieve specific targets, it remains strongly committed to the overall collective goal.

Ongoing inter-dependence between sectorial stakeholders whereby one cannot advance one's interests without the help and support from the others (Börzel and Heard-Lauréote 2009) becomes crucial for policy coordination. Implementation of innovation policy is largely dependent on the support of non-state stakeholders and their resource contribution to the process. Jessop (2004) emphasizes that each stakeholder contributes specific assets that are needed by others. For example, state capacities involve political powers, legislative, fiscal and/or coercive powers. Non-governmental stakeholders contribute symbolic and/or material resources such as private money, legitimacy, information, expertise, organizational capacities, or power of numbers to advance collectively agreed aims and objectives (Jessop 2004). The result is functional interdependence and tangled hierarches of actors involved in the networks. The involvement of many relevant stakeholders in the policy process also increases the acceptance of the decisions taken and their likely effectiveness (Börzel and Heard-Lauréote 2009).

Ideas, rationales and instruments for innovation policy emerge as a result of interactive learning among actors involved in the process. The actors observe each other, react to the others' movements; they copy, comment, neglect, complement, react and as such learn (Kuhlman, Shapira and Smith 2010). Learning can be observed through modified organizational strategies, setting new priorities according to accepted or conflicting norms. Stakeholders expand their worldviews, which have the potential to lead to radical shifts in how policies get to be framed, programs developed and policies implemented (Bennett and Howlett, 1992). Policy coordination is connected to policy learning where stakeholder interactions lead to learning (Radaelli 2009; Borrás 2009, Zito, 2015).

The outside stakeholders need to be 'powerful, smart and strategic' in their dealings with government to have any influence, otherwise they will be dismissed (Trilokekar et al 2013). They will have the ear of the government only if they understand government priorities, what motivates government and the political pressures the government in under. Arguments need to be persuasive and balanced, speaking in language that addresses the government's pressing priorities. Constituent consultation in policy-making has variably expanded and contracted over the years, which allows additional leeway for policy entrepreneurs to have more influence over policy decisions (Trilokekar et al 2013).

Multi-level governance theory is a helpful tool to understand the role and strategies of non-governmental stakeholders in policy coordination processes. It recognizes the multi-

dimensional and complex interplay between actors aiming to advance their specific interests. It emphasizes the aspects of rationality, interdependence and functionality in policy coordination, pointing to the specific conditions for collaboration. This framework also emphasizes the learning capacity as a fundamental factor for effective and systemic governance of innovation policy.

Methodology

The study employs a case-study research approach, focusing on the activities of the administrative leaders (VPs Research) of the 10 major research institutions in Ontario, Canada. The empirical evidence was collected through: 1) document analysis of institutional research strategies and governmental innovation plans; and 2) interviews with 35 administrators involved in Canadian innovation policy. The following stakeholder groups were represented: 10 VPs Research from the postsecondary education sector in Ontario; 5 federal level policy-makers (Industry Canada); 10 provincial level policy makers across several units, 5 experts from the national granting councils (NSERC, SSHRC, CHFI, CFI, NRC), and 5 stakeholders from the private sector. First, a content analysis (Weber 1996) was carried out, identifying themes in policy documents that are relevant to the topic, for example, how policy coordination is understood, strategic initiatives taken, and mechanisms applied for supporting innovation at the institutional level.

Interviewees were selected based on their relationship to innovation policy. Nine Vice-Presidents Research from 8 research universities and 1 college sector in Ontario were included in the core group of interviewees. Other interviews served as a supporting and validating mechanism to provide additional evidence for the argument of the study. All interviews were carried out in the summer/fall of 2015. Interviews were recorded and transcribed. Data were coded using NVivo software. The analysis involved determining categorical themes (open coding), establishing patterns (axial coding and selective coding), and developing generalizations from the information provided through the interviews (Creswell 1998).

Findings

Vice Presidents as Policy Advocates

The findings confirm that VPs Research play a significant role in Canadian innovation policy. On one hand the VPs are working internally to oversee the institutional implementation of governments' research and innovation policy *(e.g. 'ensuring that the university complies with all of the various regulations that we face', 'we implement policy objectives'*, *'I'm also in charge of the Research Ethics Board'*). On the other hand the core responsibilities include more strategic participation in external policy processes (*'I have to act as an advocate for research outside the university', 'we try to influence the policy objectives', 'one of my roles is to be an advocate for Canadian innovation and research policy'*). The representatives from the federal government confirm that universities are significant stakeholders in shaping the innovation agenda. They recognize

the impact of universities but also indicate that colleges are having a growing influence on the processes as well. Similarly, Tri-Council agencies administrators note that the policy directions are increasingly influenced by the bottom-up initiatives coming from the research institutions. Such broad recognition confirms the advocacy role and growing participation of university VPs Research in Canada's innovation agenda.

Informants have learned that in order to be effective in their work, one needs to actively participate in the formal networks (e.g. university/college associations) but also have the capacity to navigate the informal channels (knowing the right people). There was a general consensus among the participants that a proactive approach to participation in the external policy debates is beneficial. One participant comments:

> *'if a university would like to be heard /.../ it has to reach out to governments, to different associations and negotiate, provide information and negotiate its interests.'*

Another participant mentioned that sometimes it is a matter of one's capacity to schedule private meetings with government officials or making informal phone calls that leads to accomplishing institutional goals in a timely manner. Developing those networks takes time, experience and adaptive learning skills. The 10 VPs Research interviewed had a minimum of eight years of experience working in various leadership positions. Prior to assuming their current role, these people had previously worked as either an academic with extended contacts among industry, served as an (associate) VP Research in another university or moved to the university top leadership position internally from a vice dean or dean position. This finding implies that universities recognize the value of unique leadership experiences and previously established contacts that these people bring into their position as VPs Research. Already established relationships open up channels for horizontal (across sectors) and vertical (across levels of government) information flow and provide institution with access to advocating for its interests.

There are differences in the advocacy role depending on the size and the research capacity of the institution. University representatives that oversee a large research enterprise commented on being frequently included in the government policy discussions, roundtables and they had an overall positive outlook on the opportunities to be involved in the national level policy debates. A Tri-Council agency representative reflects: '*The universities, especially the large ones, play a very important role [in shaping the innovation policy]*'. Yet a participant from a smaller institution recognized that his communication tended to be small-scale mainly at the provincial level:

> *'I'm a doer in the innovation and research policy landscape. /.../I have tried in my humble way to play a role in influencing that policy. But really, I'm a receptor.'*

Those differences may have an impact on determining the overall research priorities favoring the interests of the larger research universities, potentially overlooking unique and niche-specific innovation opportunities provided by the smaller institutions.

Navigating the Multi-Actor and Multi-Issue Milieu

Research and innovation policy increasingly involves engagement and communication across numerous actors that operate at different levels of government (federal, provincial and regional/municipal), outside of government (e.g. granting agencies, research councils, other universities, industry partners, professional associations and councils) and across policy sectors (e.g. financial units, intellectual property offices, commercialization offices, health-related agencies, immigration and employment experts, sector specific experts, politicians). One participant refers to being alert about the multi-issue context related to his job:

> '*You always want to make sure that your university is aware of what's going on and what's coming down the pipes in terms of priorities for governments and funding research and that sort of thing.'*

The complexity of those activities and the diversity of stakeholder interests make it extremely challenging to navigate the system. As such, it becomes the question of making deliberate choices and setting clear priorities when and how one can best achieve the goals. The primary trigger for university VPs Research to reach out and engage in policy discussions emerge when there is a direct opportunity to advance institutional research interests. This finding aligns with the functional and rational nature of policy coordination. A university VP Research comments:

> '*Universities will typically engage depending on how important the individual issue is. So you will always find leadership when it's an area that is critically important [to university]*.'

The underlying rationale for active participation is often related to funding. For example, the federal Tri-Council agencies fund most national level research and it has become a priority to be involved in those policy discussions. Those opportunities were viewed in positive light – '*things that work well is when those [cross-provincial round] tables come together with university leadership and there's a consultative process that results in policy change. That has happened a number of times'*. As the federal government provides the largest source of funding for university research in Canada, participation in the federal policy debates has become a priority. Most VPs Research confirmed that they are more closely communicating with the federal government than the provincial government. A participant comments:

> '*if you ask what's more important to me, I would have to say that the federal government is, because we have a bigger share of our finances coming from the federal government, than we do from the provincial government.*'

Another VP Research referred to the flexibility in its interactions: *'it's quite interesting that my interaction tends to follow where I receive money and support.'* As the provincial government has introduced new funding schemes, the relationship with the university leaders has the potential to become closer.

The complex relationship between the federal and provincial governments has created a situation where university vice presidents often operate as liaisons to find a common ground between the governments, coordinating policy issues and helping to find mutual interests. A university VP points to the tension that such situations create:

> *'I won't tell you the number of times that I've had a discussion with the federal government about something that has provincial implications and had a discussion with the province about the same type of thing, and the two of them are not talking to each other. They're almost using the University as an intermediary between the two of them /.../ It's just the situation that you end up having to deal with in terms of trying to figure out what's the best path forward to achieve something*.'

While mediating policy discussions and aiming to find mutual interests, the universities are still very much in charge of their own research agendas. A participant comments: '*we don't run our strategic vision for a university based strictly on government plans.'* Federal government experts also note that universities have lots of freedom and independence in their decisions and the development of innovation strategy has taken a consultation format instead of a restrictive approach. It aims for gaining voluntary support and collaboration from the partners. This finding aligns with the perspective of inter-dependence as argued in the multi-level governance framework where one stakeholder cannot advance its agenda without the support and cooperation from the others.

Strategies Used

Canadian innovation policy has limited formal mechanisms to coordinate policies among stakeholders (Doern et al 2016). Policy coordination takes place mainly through informal channels and through collective action. University leaders have a significant role to play in initiating and facilitating coordination processes. VPs Research have learned to utilize several strategies in order to navigate the multi-actor and multi-interests scene of innovation policy. One strategy that has been helpful is to align stakeholders that share common interests and create alliances. A participant described policy coordination as *'a means of coordinating the development of policy in a manner that is nationally beneficial to the broadest number of stakeholders'*. It was recognized that government listens to numbers and therefore an effort is made to find stakeholders that share common interests – '*we would look for our colleagues who would share our opinion'*; '*where there are common interests there's obvious gains to be made from coordinating policy'*.

The results indicate that framing of the issue plays an important role in aligning partners and finding a common ground. Framing is used to manage perceptions, create awareness, secure support and mobilize actors to support a particular idea or a narrative (Cram 2011, Verduijn, Meijerink and Leroy 2012). In order to promote ideas and interests in innovation policy, a discourse of advocating for a broader cause such as '*promoting national interests*' or working towards '*national innovation agenda'* is often used. A narrative that has been used to influence politicians and government stakeholders is the success story of 'university-industry partnerships'. This narrative has been used to gain

support for particular research initiative or advocate for increase in government funding. A participant recognizes that those images sometimes do not always match the reality:

> '*All we do is bring industry partners who we have served and we put them in front of a bunch of politicians, both provincial and federal, and they tell their stories. That's a way to get industry involved, but absolutely there is no way that you could say that private sector is putting a lot of time and energy into influencing or improving innovation research policy in Canada. I just don't think that's true*.'

There were several comments made by the university participants as well as industry partners regarding limited motivation from the private sector in partnering with the universities. An industry representative from IBM notes that they do get involved in partnerships only because government is supportive and expects such an involvement: '*We work with a lot of universities because it is the right thing to do but we don't count on it to generate the new products or new ideas in Canada.*' Yet governments at the municipal, provincial and federal level are all interested in supporting such modes of innovation and universities are using this to negotiate mutually beneficial policy decisions.

The most commonly mentioned strategy to coordinate policy and get a unified message to the governments is to use professional (university/college) associations and other organizations that are increasingly involved in shaping innovation policy. Organizations such as U15 (Group of Canadian Research Universities), Association of Universities and Colleges Canada (AUCC) (now Universities Canada), Ontario Council on University Research (OCUR), Colleges Ontario and Polytechnics Canada were mentioned most often. A participant notes that individual institutions typically do not have much influence on policy decisions:

> '*It's much more effective to have one voice representing all 20 universities than to have 20 different voices each, you know, promoting their own interests.*'

Another powerful tool is to get discipline-based associations involved, which are composed of area experts and recognized scientists. Government tends to listen to those groups as they create evidence-based position papers grounded in recognized expertise.

Several participants mentioned the importance of being involved and providing input through national level policy evaluations or assessment-based reports. Two reports – the 'Jenkins Report' (2011) that reviews federal support to R&D and the 'Emerson Report' (2015) that focuses on evaluating innovation and Canada's transportation system were mentioned. It was frequently stated that participation in those federal policy reviews is an important channel to get one's voice heard and has high potential for an impact in getting institutional ideas incorporated into policy recommendations.

Individual approaches to government, meeting directly with senior ministers or senior deputy ministers, is usually made at the level of university presidents. Quite often it will be the president together with the VP Research. The importance of individual contacts and connections was often recognized: *'There is no substitute for the personal relationship'.* Initiatives at the sub-national level to influence provincial governments

other than those in one's own province emerged in the interviews. In order to advocate for large-scale cross-provincial research projects support from a variety of provincial governments is needed. To achieve that goal, a strategic approach through personal and individual contacts in those partnering research universities is used:

> '*It is very difficult for an Ontario institution to negotiate with the Alberta government. That doesn't work because they [provincial governments] only care about their jurisdiction. So we would work with the U of A [University of Alberta]. The U of A would try and influence their province'.*

Overall individual contacts and approaches are used less often than advocacy through professional associations. Those provide 'power in numbers approach' and have proven to be successful in order to influence government stakeholders in innovation policy. Media tools, opinion articles and institutional open letters are used as the last resort. If all other approaches have been unsuccessful, then public support is sought.

Evidence of Impact

The participants were asked to cite examples of the successful policy coordination initiatives that they had been involved in. Most were able to describe specific occasions where their influence or contribution had led to a tangible policy outcome. Two participants talked about their institutional input to the Jenkins Report (2011), a federal initiative involving universities that provided critical recommendations to streamline and improve federal research and development (R&D) policies. The Jenkins Report has been the main guiding document for streamlining Canada's innovation agenda. A participant reflects:

> *'So the Jenkins Report was a key piece of an expert panel that resulted in a series of changes in terms of how the innovation agenda was handled and universities were very much involved in that.'*

Several participants commented on the successful advocacy activities that led to significant funding increases across the post-secondary sector. One specific example was the creation of the Canada First Research Excellence Fund (CFREF). The CFREF is a $1.5 billion dollar investment, announced by the federal government in 2014 that addresses the need for Canada's research-intensive universities to compete on the world' stage and attract research talent (CFREF, 2017). According to the participants, the fund was created in response to collective lobbying from university leaders representing the top 15 Canadian research universities (U15). A college sector representative described another collective advocacy initiated through Polytechnics Canada that led to creating a specific 'college only' funding category within the NSERC Tri-Council funding scheme. According to the informant, it took them about eight years from the early negotiations to the final outcome of creating this 'Community and Colleges Innovation Program'. There were also a few examples provided of the initiatives that led to the direct institutional benefits:

> *'I think the specific initiative, that I had most personal involvement, was gaining funding for this Institute for Quantum Computing where we effectively convinced the federal government it was a good idea, and got money directly from Industry*

Canada, not through one of the granting councils. We then went to the province and demonstrated the opportunity to them and got some money directly from research and innovation that's not part of any formal funding program of the province.'

One example of policy coordination was brought at the operational level where universities advocated for creating Canadian Common Curriculum Vitae, a unified CV format that is used across Tri-Council grants. Previously all agencies had their own application requirements, which created a complex system that was very cumbersome and time-consuming to navigate.

Not all coordination initiatives led to success stories. There were several examples of the initiatives that are still works in progress. University leaders frequently brought examples on how limited cross-provincial policy coordination has forced them to reconsider innovative research collaborations and become more active in advocating for collective interests. A participant reflects:

'There's an opportunity to build cyber infrastructure in the north. We're working with a bunch of industry partners across the country. We wanted to implement a program that involves Yukon, Nunavut, Northern Ontario, Northern Labrador. The province of Ontario only wants to support any implementation in Ontario. While it might be a provincial priority in Ontario and therefore Quebec doesn't want it. So what do you do, skip over that province because it's not a provincial priority there?'

Another vice president shares his experiences on obstacles with international research collaborations:

'I think the decentralized approach hurts us in attracting global R&D. I was speaking with Audi yesterday. So the APC [Automotive Partnership Council], it was $200 million dollars, lots of incentive to do research in really interesting ways but you had to have a partner and the only partner that was eligible was one that did R&D in Canada. So if your partner happened to be Volvo or Audi, you couldn't qualify. You had to partner with GM or with Ford [to be eligible] and there's only – you know, there's only so many partnerships they want to support.'

Those examples illustrate how governments still play a core role in steering innovation initiatives despite its seemingly decentralized approaches. Policy coordination across inter-jurisdictional realms is difficult to achieve without a strong incentive and interest from the ground. As there are significant financial consequences involved in those large international or cross-provincial research projects, the active lobbying behavior by the university leaders continues.

Conclusion

This paper analyzed the role and activities of university Vice Presidents Research in shaping innovation policy in Canada. The findings demonstrate that VPs Research do play an active and important role in shaping policy decisions in innovation and research

policy. It is necessary to understand and appreciate how much time and effort university leaders place in activities related to policy coordination, which cannot always be quantified in order to show a clear return. While there is an active two-way communication between the levels of government and research institutions, it is often the universities that initiate policy discussion by pushing agendas, advocating for institutional interests and operating as binding connections among stakeholders in multi-level governance framework. As such, VPs Research often serve as catalysts in Canadian research and innovation policy driving and influencing government discussions.

Navigating the complex landscape of innovation policy for non-governmental stakeholders is primarily an issue-driven bottom-up activity. According to the evidence, policy coordination is not an end goal but is rather a part of the process, a mechanism that can lead to promoting institutional innovation agendas and securing national-level research funding. This finding aligns with Breznitz and Feldman's (2012) research whereby not all universities' involvement in the local community is altruistic. Universities either have a specific problem they need to resolve or they become a central player in their region in order to improve the surrounding neighborhoods that benefit a broader research infrastructure. The findings indicated that university leaders can function as mediators between different levels of government, aiming to negotiate policy initiatives in a collaborative manner. The Canadian decentralized model of research and higher education policy creates rationales for non-governmental stakeholders such as VPs Research to actively participate and contribute to policy developments. As the Canadian federal government has intentionally reduced its political control over innovation policy (Doern 2007), it has placed responsibility for innovation to university-industry sector to reach out, provide constructive feedback and make relevant policy suggestions to the governments.

These strategies indicate that individual learning that has occurred as a result of coordination activities. The VPs Research were confident of their impact and on the methods to use in order to have an anticipated outcome on policies. The most powerful tool is to work with university/college associations that merge a significant number of institutions that share similar interests. Several examples were provided as evidence of influence resulting from the lobbying work of associations. Yet individual connections were also regarded as important with clear examples to illustrate direct funding gains. Overall, this paper adds clear evidence to support the powerful role university leaders play in Canadian innovation policy. According to a multi-level governance framework, the coordination dynamic is rational in nature, dependent on stakeholder interests and assumes individual learning capacity. With the new Liberal government and emphasis on hearing the voices from 'innovation leaders', there are even more opportunities to get involved in policy discussions and hopefully strengthen Canadian innovation capacity.

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Word count: 7375