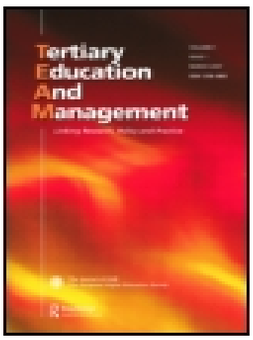

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Movers and shakers of Canadian innovation policy – recognizing the influence of university vice-presidents as policy advocates

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ABSTRACT

This paper examines the growing 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.

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Vice presidents; policy coordination; innovation policy; Canada; university leadership; multi-level governance

Introduction

Over the past two decades research universities have gone through tremendous transition, from being passive implementers of research policy to becoming active entrepreneurial actors in the innovation landscape (see Audretsch, 2014; Dill & van Vught, 2010; Etzkowitz, 2004). Increasing research evidence demonstrates that university leaders such as rectors, presidents, vice-rectors or vice-presidents are taking a pro-active approach in initiating new industry partnerships, creating regional innovation networks and attracting talent to local economies (see Benneworth & Charles, 2005; Bramwell & Wolfe, 2008; Lehmann, 2015). There are several reasons for this. Scholars have observed the changing nature of university governance towards strengthened management authority (Blackmore, 2016; Metcalfe et al., 2011). Many university managers are expected to secure additional resources for their institutions (Cleverley-Thompson, 2016), comply with research assessment exercises (Kolsaker, 2008) and demonstrate their institutions' societal contributions to governments (Kroll, Dornbusch, & Schnabl, 2016). Responding to those external pressures has also increased the advocacy roles of university senior administrators.

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While there is research done on the managerial and leadership roles of university senior administrators internally (see Cleverley-Thompson, 2016; Pilbeam, 2012; Sá & Tamtik, 2012), there has been limited focus on examining their external advocacy role or strategies that university senior managers utilize in shaping national innovation agendas. Most universities have appointed provosts, vice-rectors or vice-presidents research for focused engagement with governments and industry to facilitate innovation initiatives. Pilbeam and Jamieson's (2010) study demonstrates how a network of university Pro-Vice Chancellors is increasingly participating in national level policy debates in the UK. Breznitz and Feldman (2012) report how university leaders in the US are approached to provide evidence-based recommendations and contributions to policy development. The research on higher education management in Canada is particularly scarce on that account (Metcalfe et al., 2011). The purpose of the paper is to examine the advocacy roles of university senior managers and address the perceived gap around policy advocacy in governments' innovation policy. In this paper the focus is on Canadian Vice Presidents Research, which is the second highest ranked official in the university governance system who reports to the President. Vice-President Research in the Canadian context corresponds to Pro or Deputy Vice-Chancellor (Research) in the UK system, Vice-Chancellor in the US context and *Prorektor* (Research) in many continental European contexts. More detailed knowledge on this dynamic would allow us to understand better the specifics of policy agency and the growing influence of non-governmental stakeholders in innovation policy, which in turn guide the practices in higher education.

The following research questions guided the study and analysis – What is the nature and dynamic of work that characterizes the activities of Canadian Vice Presidents Research in innovation policy? What administrative strategies are being used to participate in national level policy debates regarding innovation?

Canadian context

Canada is a confederation, a political system that implies a distribution of responsibilities among the different levels of governance (Salazar & Holbrook, 2007). While the federal government is responsible for Canada's overall economic competitiveness, 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 leading to limited policy coordination and a fragmented approach to innovation policy (Doern, Castle, & Phillips, 2016; Niosi, 2000; Salazar & Holbrook, 2007). Canadian government has experimented with more centralized coordination practices in science policy between the 1960s and 1980s and more decentralized, network-based forms of coordination from the 1990s onwards (Atkinson-Grosjean, House, & Fischer, 2001; Clowater, 2012). 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 (Atkinson-Grosjean, 2002; Salazar & Holbrook, 2007). The focus has been on supporting local and regional university-industry connections through policy and practice. The 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 and increased program funding for new public-private partnerships (Government of Canada, 2014). Such an indirect steering approach has made

the importance of lobbying for resources and favorable funding conditions crucial, triggering the active interest of university leaders in governmental policy discussions.

In 2016, the newly elected federal government announced its goal to build Canada into a 'center 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 '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 (Government of Canada, 2016). Such a focus sets the stage for an increased role of university leaders as 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), the 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.

The Canadian innovation landscape represents a context where non-governmental stakeholders are invited to actively participate in national policy debates. At the same time, the constitutional disconnect between the levels of government requires strategic decisions from the institutional leaders in order to advance organizational interests. Hence Canada provides a unique case that allows the examination of the specific dynamics of VPs Research in navigating this complexity and making decisions on how to best advocate for institutional interests.

Theoretical perspectives

The multi-sector, multi-issue and multi-actor complexity of innovation policy has been widely recognized (Edler & Kuhlmann, 2008; Peters, 2015; Tamtik, 2016). 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 & Moodysson, 2015).

Multi-level governance theory provides a framework that allows understanding the multifaceted environment of innovation policy. 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 dialog 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 of multi-level governance approach are: (1) the authority of collective decision-making; (2) interdependence among stakeholders; and (3) mutual learning processes (Börzel & Heard-Lauréote, 2009; Hooghe & Marks, 2001; Zito, 2015).

Sikkink (2005) argues that 'multi-level' interaction among groups provide 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. Jessop (2004) emphasizes that each stakeholder contributes specific assets that are needed by others. For example, state capacities involve political, 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). Ideas and instruments for innovation policy emerge as a result of interactive learning among actors. Once actors observe each other, and react to the others' movements, they copy, comment, neglect, complement or react, all of which leads to learning (Kuhlman, Shapira, & Smits, 2010). Learning outcomes can be observed through modified organizational strategies, setting new priorities, developing programs according to accepted or conflicting norms.

In order to zoom into individual actor behaviors, a literature focusing on interest group dynamics is helpful. Beyers, Eising, and Maloney (2008, p. 1103) propose three factors that define actor (VP Research) or an institution (such as university) as an interest group – *organization*, *political interests* and *informality*. Organization means aggregated individuals and/or organized forms of political behavior (e.g. university associations, university presidents' membership organizations). Political interest refers to the attempts made to influence policy outcomes. This aspect is often called political advocacy, which denotes all efforts to push public policy in a specific direction. Informality means that these groups do not seek government office but pursue their goals through frequent informal interactions with politicians and bureaucrats (Beyers et al., 2008).

The interest groups have the capacity to mobilize resources (e.g. authoritative or expert information) on which policy makers depend. Beyers (2008) distinguishes among three types of policy issues or problems – (1) particularistic (concerns only a few groups pursuing their interests); (2) dividing (actors share common goals but disagree on how to realize those); (3) unifying (broader issues that impact the functioning of the whole economy and have broad societal implications). Particularistic issues lead to instrumental influence, where the focus is on the ability to adapt or modify existing policy tools in order to make them more efficient and effective without affecting the paradigm that underpins the policy. Unifying issues lead to directional influence that leads to a general policy shift (e.g. change in immigration policy to support the attraction of researchers). Dividing issues might lead to either instrumental or directional outcomes.

As Canadian science and innovation policy is increasingly characterized by network dynamics and collaboration among governmental, regional and non-state actors, the multi-level perspective is fitting. Supported by the analytical concept of interest groups, it is helpful for understanding the individual advocacy role of Canadian VPs Research in innovation policy.

Methodology

The study employs a qualitative case-study research approach, focusing on the activities of the senior administrators (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: ten VPs Research from the postsecondary education sector in Ontario; five federal level policy-makers (Industry Canada); ten provincial level policy makers across several departments, five experts from the national grant councils (the Natural Sciences and Engineering Research Council [NSERC], the Social Sciences and Humanities Research Council [SSHRC], the Canadian Institutes of Health Research [CIHR], the Canadian Foundation for Innovation [CFI] and the National Research Council [NRC]), and five stakeholders from the private sector.

A content analysis (Weber, 1996) was carried out, identifying themes in policy documents that are relevant to the topic, for example, the role of university leaders, 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 nine research universities and one college 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 advocacy role in Canadian innovation policy. On the one hand the VPs are working internally to oversee the institutional implementation of governments' research and innovation policy (e.g. 'I ensure that the university complies with all of the various regulations that we face', 'we implement policy objectives'). On the other hand, the less visible responsibilities include 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'). There was a general consensus among the participants that a proactive approach to participation in the external policy debates is necessary.

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 process as well. Similarly, grant council 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.

The complex relationship between the Canadian 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.

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 or roundtables and they had an overall positive outlook on the opportunities to be involved in the national level policy debates. A grant council administrator confirms: 'The universities, especially the large ones, play a very important role [in shaping the innovation policy]'. Those differences can be explained by the desirability of resources available. Larger research-intensive institutions have more information, expertise or power of numbers that smaller colleges might lack. Yet this selectiveness might lead to potentially overlooking unique and niche-specific innovation opportunities where smaller institutions or colleges are involved.

Drivers for active participation

The multi-issue, multi-actor and multi-level environment makes it challenging to navigate the innovation system. As such, it becomes a question of making deliberate choices and setting clear priorities as to when and how a leader can best achieve the goals. The decisions made based on the strategic importance of organizational survival were apparent. Confirming the findings of Tandberg (2006), the primary trigger to reach out and engage in policy discussions emerges when there is a direct opportunity to advocate for additional institutional funding. This finding also aligns with the functional and rational nature of policy coordination. 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:

> 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 confirmed the point: 'it's quite interesting that my interaction tends to follow where I receive money and support'. However, as the Ontario provincial government has introduced new funding schemes, the relationship with the university leaders has the potential to become closer.

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 that the development of innovation strategy has taken a consultation format instead of a top-down centralized approach. It aims for gaining voluntary support, active collaboration from the partners and creating ownership of decisions. 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 voluntary support and cooperation from the others.

Strategies used

Canadian innovation policy has limited formal mechanisms to influence government decisions (Doern et al., 2016). 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). 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'. 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. The importance of individual contacts and connections was often recognized: 'There is no substitute for the personal relationship'. Individual approaches to government, meeting directly with senior ministers or senior deputy ministers, are usually made at the level of university presidents, sometimes accompanied by the VP Research. However, approaches that involve 'power in numbers' have proven to be the most successful.

The most commonly mentioned approach for getting a unified message to the governments is to use professional (university/college) associations and other organizations that are increasingly involved in innovation policy debates. 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 strategy that has been helpful is to create alliances among stakeholders that share common interests. 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'. Sometimes discipline-based associations are 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 scientific expertise.

A more indirect approach to align partners for a common problem is issue framing. 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, & Leroy, 2012). A narrative of advocating for a broader cause such as 'promoting national interests' or working towards a 'national innovation agenda' is often used. Another discourse that is used to influence politicians and government stakeholders is the success story of 'university-industry partnerships'. This narrative has greatest impact when advocating for a particular research initiative or lobbying for increased government funding. A participant recognizes that those images sometimes do not 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 the 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.

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. 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 successful initiatives in their involvement as policy advocates. Most were able to describe specific occasions where their influence or contribution had led to a tangible policy outcome in financial terms. In their answers all three issue types (as per Beyers, 2008) – particularistic, dividing and unifying – were present.

Several participants commented on successful advocacy activities that have led to significant funding increases through establishing new grant programs. 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 (Canada First Research Excellence Fund [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 a different collective advocacy success story, initiated through Polytechnics Canada, which has led to the creation of a specific 'college only' funding category within the NSERC grant 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'. This is an example of a dividing policy issue, where VPs Research agreed on the necessity of increased funding, yet differences emerged on how to achieve it. The separate funding channels create a boundary between college and university sector that might have an impact on how their research contributions are valued.

One example of particularistic policy issue was at the operational level where VPs Research advocated for creating Canadian Common Curriculum Vitae, a unified CV format that is used across NSERC, SSHRC and CIHR grants. Previously all agencies had their own application requirements, which created a complex system that was very cumbersome and time-consuming to navigate. As a result of collective lobbying the operational problem was cleared.

While only two participants talked about their institutional input to the Jenkins Report (2011), it presents an example of a unifying policy issue as it affected the functioning of the whole innovation system in Canada. The Jenkins Report was a federal initiative where post-secondary institutions were invited to provide critical recommendations to streamline and improve federal research and development (R&D) 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.

Having a major implication on the whole system, it might have been seen as a less tangible contribution, yet it has a long term broader policy implications.

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

> 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?

Those examples illustrate how governments across levels still play a core role in steering innovation initiatives despite their 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 VPs Research continues.

Conclusion and discussion

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 a very active advocacy role in innovation and research policy by reaching out to both levels of governments, seeking partners that share their interests and navigating among diverse stakeholder groups. Those activities were reported not only by the VPs themselves but observed also by the policy-makers of the federal government and administrators of the research grant councils. That VPs Research were open to discuss tensions among stakeholders, reflect on unsuccessful projects and describe strategies that were used to intentionally paint a nicer picture of reality (industry partnerships) adds to the credibility of the findings. Operating in the context of multi-level governance, this study confirms previous research results whereby there is a growing influence of non-governmental stakeholders (such as university leaders) in the design, implementation and administration of policy decisions in higher education (Fumasoli, 2015; Gornitzka & Maassen, 2000; Piattoni, 2010). The aspect of advocacy is crucial to the educational administration, as policy guides practice and being part of policy-making helps leaders in the post-secondary system influence the path for organizational success.

The findings of this study add important empirical evidence to the literature on academic capitalism and particularly to the evolving role of institutional managers as intermediary agents in university settings (see Jessop, 2017; Metcalfe et al., 2011; Slaughter & Cantwell, 2012). Slaughter and Rhoades (2004) note that university administrators and academic professionals are creating operative networks that link higher education institutions to knowledge economy, yet the activities of individual administrators have not been explored at

great length. This paper demonstrates how university senior managers have grown in influence and have become important organizational actors who operate across the state, state agencies and industry organizations contributing to the economization of higher education and research. As intermediaries in higher education organizations they aim to reshape the boundaries of public and private to create new opportunities for their institutions in the realm of the knowledge economy.

The Canadian decentralized model of research and higher education policy creates a solid foundation for university leaders to participate and contribute to policy developments. The Canadian federal government has intentionally reduced its political control over innovation policy (Doern, 2007), which has placed responsibility for innovation initiatives largely on the university-industry sector. While there is an active two-way communication between the two governments (federal and provincial) and the research institutions, there is a limited collaboration between the provincial and federal governments. University leaders often function as mediators between them, aiming to reconcile diverse interests for increased policy coordination.

The findings indicate that navigating the complex landscape of innovation policy for non-governmental stakeholders is primarily an issue-driven bottom-up activity. As higher education sector in Canada is facing increasing financial concerns, VPs Research are foremost motivated by the financial opportunities that emerge as a result of their advocacy work. As such, VPs Research can have a major impact on securing additional resources for their institutions. In addition to direct financial impact, the prospect of influencing national level broader vision for innovation is also significant. This opportunity is viewed as a learning opportunity that allows reflecting on long-term directions for the whole country, making sure that their institutions engage in research that is relevant and timely.

The use of multi-level governance theory proved to be a beneficial lens for the analysis. First, multi-level governance theory helps to explain why VPs Research are actively engaged in policy advocacy. Only by building alliances and finding strategic partners can an individual leader navigate the complex web of multi-level stakeholders and advance institutional interests in the policy process (Börzel & Heard-Lauréote, 2009). Multi-level governance theory also helps us to understand the rational choices individual leaders make for their strategic interactions. Corroborating with Beyers (2008) research, whereby the nature of the policy issue determines the specific strategies involved, it became evident that when dealing with issues that have impact on broader society, the larger 'good-for-society' narratives are used. Those can potentially attract the broadest group of stakeholders and lead to tangible policy outcomes. To secure the uptake of a policy issue, strategic and intentionally focused alliances are employed. Most often the formal university associations as powerful lobby groups are used. However, informal alliances among institutional partners are also a way to push for support for specific projects. For particularistic issues direct individual contacts are established that might lead to smaller program-specific operational fixes which concerns smaller number of groups.

Second, multi-level governance theory highlights the need for clear policy coordination mechanisms between the stakeholders. The theory suggests that both vertical (across tiers of authority) and horizontal (across spheres of authority) cooperation and coordination are needed in order to advance the Canadian innovation agenda. Currently, the individual interactions are quite sporadic, driven narrowly by institutional financial perspectives. Permanent policy dialog and clear mechanisms for information exchange can support continued

knowledge exchange among stakeholders so that a coherent vision for Canadian research and innovation can be secured.

Third, multi-level governance theory emphasizes stakeholder learning. Calculated use of the variety of strategies indicates that individual learning has occurred as a result of the policy advocacy process. The VPs Research were confident of their methods chosen to have an anticipated outcome on policies. Scholars emphasize that innovation is ultimately a social process that emerges not as a result of increased financial resources but entrepreneurial collaboration and learning practices (Borrás & Edquist, 2014; Lundvall, 2009). Governments can play an important role by supporting and sharing information, creating institutional arrangements and establishing settings for knowledge exchange to occur among the individual stakeholder groups. Hence, it is time to fundamentally rethink how governments can collectively support innovation further.

Although the multi-level governance approach emphasizes important aspects in the governance process, there are also limitations in using this approach. The core weakness of the multi-level governance theory is in its empirical vagueness. As multi-level governance approach often involves informal coordination processes, the core challenge of this approach is the limited empirical data and absent visibility in decisions (Papadopoulos, 2010). It is challenging to determine how decisions were reached, what was the specific mechanism and which stakeholder group had most influence. As a result, there is often a certain vagueness in individual responsibility for decisions and clear accountability mechanisms among stakeholders.

Overall, this paper adds evidence to support the powerful role university leaders play in Canadian innovation policy. Those advocacy developments are seen partly as reactions to neoliberal pressures that are becoming reality in Canada and beyond. 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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