

Operationalizing ‘Policy Capacity’: A Case Study of Climate Change Adaptation in Canadian Finance Agencies

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Abstract. Although a widely used term in the literature, much of what we know about “policy capacity” in government is limited to anecdotal evidence. Policy scholars have not systematically investigated the ability of policy professionals to provide good advice in relation to new policy challenges; indeed many are skeptical that policy capacity (understood as the potential for “evidence based policy learning”) is an important driver of policy change in the first place. Despite these empirical and theoretical problems, governments remain committed to improving policy capacity in the pursuit of better public policy. This paper offers some preliminary observations on the difficulty of studying and operationalizing policy capacity through an examination of the finance sector in relation to climate change adaptation; part of a large collaborative SSHRC CEI project. Drawing on the existing literature on Canadian finance policymaking dynamics, a survey of policy professionals in the area, and an illustrative case study, the paper makes two claims. It suggests that viewing capacity as involving both the cognitive skills of professionals (or “analytical capacity”), and the institutional arrangements in which policy research is conducted (or “governance arrangements”), is a useful starting point. However, as the findings in this paper highlight, if capacity is the ability to provide effective advice in relation to specific problems, then the nature of the problem itself (how “wicked” or otherwise it might be) will also impact capacity.

Keywords. Climate Change Adaptation, Finance, Policy Capacity, Governance Arrangements

Introduction

Since at least the mid 1990s, public officials and informed observers of policymakers have obsessed over the impact of policy capacity (or the lack thereof) on the effectiveness of government. Academics and veteran public officials have

Résumé. Bien qu’il soit abondamment utilisé dans la littérature, ce que nous savons à propos de la « capacité d’élaboration des politiques publiques » reste anecdotique. Les chercheurs en politiques publiques n’ont pas examiné systématiquement l’aptitude des professionnels des politiques publiques à fournir des conseils pertinents concernant les nouveaux défis de politiques publiques ; d’ailleurs, nombreux sont ceux qui doutent que la capacité d’élaboration des politiques publiques (entendue comme le potentiel pour un « apprentissage des politiques publiques fondé sur les faits ») soit un moteur important de changement dans le domaine des politiques publiques. Malgré ces problèmes empiriques et théoriques, les gouvernements restent engagés à améliorer la capacité d’élaboration des politiques publiques, dans le but de consolider les politiques publiques. Cet article offre quelques observations préliminaires s’agissant de la difficulté d’étudier et d’opérationnaliser la capacité d’élaboration des politiques publiques à travers l’examen du secteur financier en lien avec l’adaptation au changement climatique ; ceci est le produit partiel du vaste projet de recherche CRSH CEI. En se fondant sur la littérature existante sur les dynamiques de l’élaboration des politiques dans la finance canadienne, sur une enquête sur les professionnels des politiques publiques dans ce domaine, et sur un cas d’étude explicatif, cet article formule deux propositions. Il suggère que regarder la capacité comme impliquant à la fois les compétences cognitives des professionnels (ou « capacité analytique »), est un point de départ utile. Cependant, comme les résultats de cet article le montrent, si la capacité est l’habileté à fournir des conseils efficaces concernant des problèmes déterminés, alors la nature du problème lui-même (aussi « pernicieux » soit-il) aura aussi un impact sur la capacité.

Mots clefs. Adaptation au changement climatique, finance, capacité politique, dispositifs de gouvernance

offered a range of views on what is often portrayed as a “crisis” in eroding policy capacity, suggesting strategies that might improve capacity (Peters 1996, CPRN 2009 and Anderson 2008). Academically, “Policy capacity” has been variously represented as being “hollowed out” in light of globalization and the general erosion of the state (Cerny and Gummert 1996); as having been reconfigured given econom-

ic integration's preference for liberalization and the new public management (Conley 2002); as having the potential for rescue, given improved public finances in places like Canada in the early part of the new century (Bakvis 2000); or as a chimeral goal given the extent to which all of this navel gazing over capacity continues to assume an instrumentally rational conception of the policy process which is theoretically problematic and empirically moribund (Parsons 2004). All of this highlights the extent to which "policy capacity" has emerged as a central concern in modern governance despite the fact we have never fully grappled with how to assess the quality of policy capacity – the concept remains nebulous and poorly operationalized in much of this work. While it has been taken as given that "good" policy requires that officials have the capacity to engage in effective learning, analysis tends to therefore focus on increasing capacity without having first specified the conditions under which we can say capacity is high or low, for example.

Arguably, this obsession with capacity has developed in isolation from other currents in the policy field. Much of the policy literature highlights institutional and political obstacles to effective policy capacity, contributing to a general pessimism regarding the role of policy analysis in improving the quality of government at all. Whether based on the limitations to rational decision making (Lindbolm 1979), or "garbage cans" replete with different policy ideas in search of problems (Cohen, March and Olsen 1972), or "discourse intuitionism" and its break with any sense that policy analyses involves seeking problem solving advice at all (Schmidt 2008), much of the policy literature has reinforced a view that governments' analytical capacities are fundamentally limited - at least in terms of their ability to engage in evidence-based policy learning. Unfortunately this means that while policy capacity is a key concern, it is not a well examined or tested concept. Governments see it as vital, while academics see it as a tangential issue that perhaps misses the point of what actually "drives" policy change.

The problem with this is that a great deal more can, and should, be said about capacity. It is entirely possible to think about capacity in ways which integrate both the rational instrumental notion of capacity (Parsons 2004) and the broader lessons from the policy literature on the extent to which governance arrangements and relations amongst stakeholders may also impact capacity. Simply put, if governments want "good" policy advice in light of increasingly complex policy problems (like those implied by climate change adaptation), it is possible to conceptualize where and how capacity might be better or worse, by thinking about a broader range of factors that impact policy making.

For example, while recent research has attempted to get at capacity by exploring the skills and capabilities of policy analysts, defined as "analytical capacity" (Oliphant and Howlett 2010, Howlett and Newman 2010), suggesting implicitly that better training and more "slack" in day to day policy work for the purposes of longer term, directed, research might improve capacity, it nonetheless remains the case that the knowledge policy makers bring to effective

learning in their domains will be impeded or facilitated by more explicitly political considerations such as institutional and jurisdictional limitations of agencies involved in policy work - the "governance arrangements" under which analytical capacity is employed.

For example, in Canadian financial services, studies of governance arrangements have raised doubts about relations amongst key policymakers and the ability of the sector to implement major policy changes. Most research has highlighted the role of federalism, and the degree to which finance is a divided jurisdiction in mitigating effective policy design. Other research has suggested traditionally weak federal government governance due to the disinterest of the Bank of Canada in questions of industry regulation (Coleman 1996). Others have noted the weakness of the federal Office of the Superintendent of Financial Institutions (OSFI) in policy debates given the Provinces' key role in regulating the securities industry (Harris 2010) and the weakness of the Department of Finance in guiding policy given the high level of political interference in key policy debates in the sector (Harris 2004). Thus no matter how much analytical capacity may exist within finance agencies, effective policy capacity may be much lower if governance arrangements are this poor.

This paper offers a preliminary examination of some of the key challenges confronting policymaking capacity in relation to the finance sector and the challenges of climate change adaptation. The paper combines an overview of the institutional arrangements with an assessment of the resources governments has deployed in support of policy analysis, in part based on a survey of policy professionals. While a broad overview suggests that policy capacity on this issue may be uneven in the finance sector, given institutional arrangements and the low awareness of the issue amongst finance officials, a single illustrative case of adaptation, the prudential oversight of the insurance and pension industries in light of the climate change risk (focusing on the Office of the Superintendent of Financial Institutions - OSFI), highlights the challenges of capacity in this area. The findings highlight the extent to which the nature of a particular policy problem itself, how complex it is, or how much a solution might challenge existing institutional arrangements etc. is also crucial in understanding "policy capacity". Despite many observers' claims that climate change adaptation should be a big concern for prudential regulators, OSFI clearly believes it is a small concern, not central to their activities, reflecting the extent to which climate change adaptation issues challenge both institutional and analytical capacity in this sector.

Public Policy Capacity and Policy Learning

Understandings of policy "learning", the extent to which policymakers in a particular domain might be able to adapt to new issues, events and the availability of new information have tended to emphasize two sets of factors. They stress the "analytical capacity" of policymakers in leading government agencies, in terms of their accumulated knowledge, skills and their willingness to meaningfully engage with new in-

formation on one hand, and the structure of the policy subsystem – the relationship between those agencies and the broader universe of policy actors on the other. Indeed, as Howlett, Ramesh and Perl 2009 argue, Hall (1993) and Sabatier (1987) both highlight that conventional thinking about policy learning suggests effective learning, the kind of learning that generates programmatic responses to real problems, the kind associated with Hall’s notion of “social learning” for example, requires that policymakers have sufficient analytical capabilities in an environment in which the policy-making system is both “open” to new actors or new policy ideas and “integrated” to the extent that policy research organizations can disseminate new ideas to relevant authorities. However, if analytical capacity in a sector is limited and governance arrangements are not integrated or conducive to learning and disseminating new advice, authorities will fail to respond in a programmatic fashion to new challenges; an environment in which expertise is devoted to “fire fighting” rather than more systematic research.

Figure 1 - Typology of Policy Capacity

		Policy Analytical Capacity	
		High	Low
Governance Arrangements	Integrated	Effective Policy Capacity Able to meet long-term challenges	Analytically Impaired Policy Capacity Insufficient knowledge and expertise = focus on incremental change (?)
	Non-Integrated	Structurally-Impaired Policy Capacity Departmental policy struggles and incoherence (?)	Ineffective Policy Capacity Policy failures and short-term fire-fighting

As suggested by Figure 1, sectors that have integrated governance arrangements but limited analytical capacity will also struggle with effective learning as no matter how well organized the channels for disseminating policy advice might be (or how much appetite there might be for new ideas), agencies lack the ability to produce the advice necessary for significant policy changes. Logically, one might expect an analytical process marked by limited incrementalism, given the lack of resources necessary for examining previously unpracticed ideas. Conversely, in a sector where analytical capacity is high, but governance arrangements are less integrated, a number of outcomes seem possible. For example, if there are multiple institutions charged with overlapping mandates, analytical capacity may be used “badly” to support competing agencies and competing political agendas. Less instrumentally, agencies may simply recommend contradictory policies in the absence of coordina-

tion. Ineffective governance arrangements could also be conducive to “passing the buck” on dealing with complex new challenges, as ambiguity about responsibilities may create an environment where agencies assume “someone else” will deal with the issue. Finally, in this type of environment, it might also be logical to suggest that there is more scope for politicization of analytical capacity. If the sector is poorly integrated and therefore lacks internal coherence on policy problems there is greater scope for analytical capacity to be used for more explicitly “political” purposes.

This said, empirically assessing “analytical capacity” and the degree of “integration” of governance arrangements are not easy tasks. Furthermore this problem is made even more difficult in that assessing analytical capacity and governance arrangements in relation to a particular policy problem also requires some sense of what the structure, or properties, of the problem itself are.

For example, “analytical capacity” has proven difficult to study. Little systematic effort has been made to examine the nature of policy work inside government. There is little information available on existing analytical capacity even in a sector as large and as important as finance. Reviewing the existing literature suggests that we know very little about the scope of research activities in different organizations, the amount of analytical resources those agencies may have at their disposal and the competency of their policy analysts. While Figure 1 suggests a basic distinction between “high” and “low” analytical capacity, the task of interpreting the level of analytical capacity in any sector is difficult, *particularly in relation to specific policy problems*, as in the case of climate change adaptation. As will be discussed below, in the finance case, analytical capacity is thought to be quite high (at least at the federal level), however, assessment of the CEI data suggests that climate change adaptation does not receive a proportionate share of attention in the sector. In this case the issue may simply be too small or peripheral in the view of existing agencies, for existing analytical capacity to be well utilized.

Assessing the quality of governance arrangements is somewhat easier than analytical capacity, at least in relation to finance, as a considerable amount is already known about the basic structure of responsibilities and relationships in the sector: at least at the Federal level, there is significant apparatus in place designed to “integrate” the flow of information in the sector and agencies assigned specific research and evaluation tasks. However, as will be discussed below, the sector may be well “integrated” in relation to some issues but not others. In the absence of integrated governance arrangements, no matter how high the existing pool of analytical capacity, the advice produced by policy staff is unlikely to be utilized effectively. The quality of governance arrangements is obviously particularly important in relation to climate change adaptation as the issues involved inevitably cross federal, provincial and local government lines and often link across different policy domains; the problems associated with climate change adaptation likely pose unique

challenges for the federal division of responsibilities in the finance sector – *the sector may be well “integrated” in relation to some issues but not others.*

Governance Arrangements and Policymaking in Finance

The central role of Departments of Finance in overseeing government activities has been widely commented on for decades. Finance has extensive policy analytical capacity as ultimately it plays a role in all policy sectors through its management of the public purse. Finance agencies also tend to be highly involved in all international processes in relation to climate change cooperation, as they play a leading role in representing international economic interests. While this suggests a large role for Finance in relation to all aspects of climate change adaptation as a central coordinating agency, the policy-making dynamics are not well documented, particularly those regarding finance authorities’ responsibilities for overseeing and regulating the financial industry.

Financial services policy-making has evolved considerably in recent decades largely due to globalization and industry deregulation. Prior to the Mulroney Conservative Government’s decision to deregulate the financial services industry in the 1980s, the sector was segmented into several different industries. The mortgage and trust industry and the securities industry were provincially regulated and outside of federal jurisdiction. Banking, under the Constitution Act (1982), was a federal jurisdiction. Market segmentation had been pursued to achieve a number of different policy goals (Harris 1999). In particular, it kept commercial banking (dominated by the “big banks” separate from investment banking (the “securities industry”). It also established distinct policy domains for financial services as federal policy-making focused almost exclusively on banking, while provincial authorities were responsible for regulating investment functions in relation to the securities industry – the policy responsibilities of public finance officials in relation to private sector regulation were effectively organized into separate independent silos. Prior to deregulation, federal banking policy described as a highly integrated policy community (or “subgovernment”) in which only the leading industry participants, and the Department of Finance, played a significant role in policymaking (Coleman 1996). Policy developments were guided by a close set of informal personal relations between industry and government officials (Harris 1999) which supported a tight consensus in policy goals.

Deregulation altered policymaking dynamics (Williams 2009). In the private sector, the banks emerged as the leading players in the new environment. They came to dominate the provincial securities sector, took over the remaining second tier of local (trust company) banks and began to further diversify their operations into insurance. Despite this emerging market dominance, post-deregulation policy-making has become far more complex as policy debates were increasingly “politicized” (Harris 2004, Williams 2004). A number of previously uninvolved, or unimportant, players emerged as key stakeholders leading to a far more open and public set of policy debates and one where there is signifi-

cant institutional competition between federal and provincial agencies. In this environment, despite some relatively small developments, policy change since deregulation has proven difficult.

For example, constant proposals for the creation of a national securities regulator have gone nowhere – despite broadly accepted analyses that this is a “good idea” in light of the complexity of the industry. During deregulation the federal government promised some sort of plan to regulate the newly integrated securities industry, and has continued to pursue a variety of strategies to get the provinces to agree to federally-coordinated reform of securities regulation – indeed the federal government would like to assert Constitutional jurisdiction over the sector. However several provinces have jealously defended their remaining tenuous control over the securities industry (Roberge 2005), even in light of lessons of the recent financial crisis in which their “supervision” appears to have been inadequate (Harris 2010, Williams 2011).

Similarly there has been a long festering problem relating to the division between the insurance and banking industries. The federal government had intended to allow banks to not only own insurance company subsidiaries which they gained the power to do in 1992, but that eventually banks would be allowed to directly sell insurance “in branch” as they now sell securities. This has not occurred. Insurance companies, eager to defend their turf, have become powerful players in the policy subsystem blocking any policy changes which would improve the competitive position of banks relative to insurance companies, and have recently managed to “push back” against banks encroachment into the insurance sector based on web-based marketing and sales of insurance products. Again despite considerable analysis in support of removing the remaining “pillarized” obstacles to more diverse consumer services, policymaking dynamics have impeded change. A similar observation could be made about industry conglomeration (Williams 2004).

While many have become embittered by the “gridlock” in the sector, the broader point is that the prospects for collaboration and policy learning across the fiancé sector as a whole has been poor. The new mix of actors in the policy subsystem have all been pursuing irreconcilable agendas. The question is: to what extent do these dynamics impact policy capacity across the finance sector in relation to new challenges like climate change adaptation?

Integration and Governance Arrangements in Finance

Despite this broad subsystem context, it does seem nonetheless that governance arrangements in the finance sector are well integrated, except in those areas where there are “jurisdictional problems”; such as securities industry regulation, where ongoing constitutional struggles have undermined effective policy analysis (Harris 2010, Williams 2011). The Department of Finance is undoubtedly the central agency in the sector. It has a coordinating role over both other departments internal to government finance, through its control of the budget, and in relation to the finance domain

specifically; it has a central coordinating role over other regulatory and policymaking institutions. Indeed, since the financial crisis, this role has been formalized as a Finance Assistant Deputy Minister now chairs FISC – which is the central committee tasked with coordination of the different Canadian finance authorities - FISC brings Finance together with the Bank of Canada, the Canadian Deposit Insurance Corporation, the Office of the Superintendent of Financial Institutions, and if, it is ever created, a representative of the national securities regulator. FISC is intended to be a central “clearing house” for broad issues relating to finance. Through these kinds of mechanisms, Finance is well supported by its associate federal agencies in policy analyses – in particular the Bank of Canada and an increasingly well staffed OSFI.

In terms of how all this may impact policy capacity in relation to climate change, the governance arrangements appear to be integrated except in those areas requiring federal and provincial cooperation and coordination; in those areas governance arrangements are not integrated, and in fact are often quite conflictual.¹

From the perspective of operationalizing the typology of policy capacity, this is nonetheless a bit problematic. The sector is more or less integrated depending on how the issue interacts with existing organizational mandates and jurisdictions. This suggests that if we wish to think about integration in relation to specific policy problems we need to see it as a continuum rather than a single characterization. At one end, on policy questions “internal” to federal responsibilities, government arrangements are well integrated. At the other end of the continuum, issues that cross federal/provincial boundaries are not well integrated. Issues that are solely a federal responsibility but involve networked governance with arms length regulatory bodies and private sector actors likely fit somewhere between these two extremes. Thus, deciding how “integrated” governance arrangements might be in this sector first requires a narrow operationalization of a climate change policy challenge and who the relevant authorities might be.

The Structure of the Climate Change Problem in Finance

At broad level, climate change introduces new mandates for policy analyses to finance authorities, requiring that either existing analytical resources be tasked with this responsibility, integrating ideas about climate change into their ongoing work, or through the addition of new resources. Unlike some “smaller” policy domains, finance has considerable policy analytical capacity to begin with. Finance departments and their associated organizations have large policy staffs as a result of their relatively central role in policy advising (given their control over budget’s etc.). That said, climate change is a significant new mandate, which could overtax those resources.

Indeed climate change adaptation is a complex issue in the finance sector as it generates several different analytical challenges. On the one hand, all internal government policies and programs in response to climate change must in

some way be overseen by the Department of Finance – this is certainly revealed in the Department of Finance’s DPRs/RPPs. For example, Finance is responsible for designing and implementing carbon taxes, supporting green initiatives within government and providing funds for new energy sources and transportation projects responding to environmental concerns. The scope of the analytical challenges involved in this ultimately touches on all aspects of government policy on adaptation. Furthermore, Finance plays a central role in coordinating international initiatives on climate change, as it is almost always the case that senior Finance officials play the leading role in Canada’s international deliberations relating to economic policy – indeed the sheer volume of mentions of international issues relating to climate change on the Department of Finance’s website suggests this is a particular preoccupation of whatever analytical capacity exists inside the organization in relation to climate change activities.

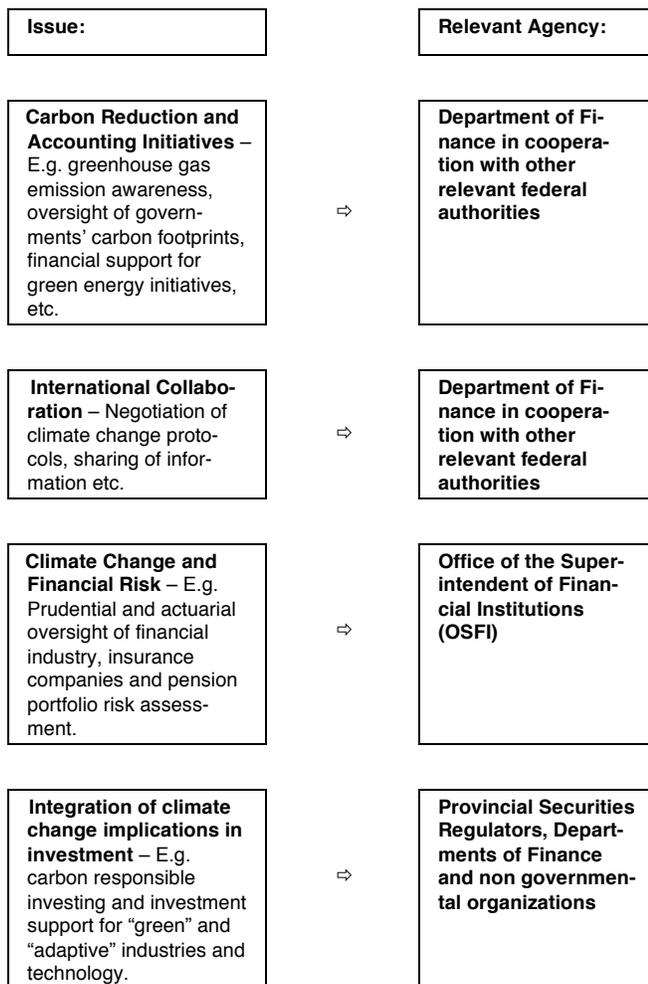
The challenges do not stop there, however. As highlighted above, Finance is also responsible for overseeing the financial services industry and therefore has responsibility for evaluating climate change issues as they touch on industry regulation. Two climate change concerns are particularly important in this light. First, as has been widely recognized by the financial services industry for almost a decade, both long-term climate changes (that may significantly challenge local economic activities) as well as increasing climate instability, pose prudential risks to certain kinds of financial service companies and financial products.² Regulatory authorities need to integrate knowledge about likely climate impacts into assessments of financial risk, particularly in relation to the insurance industry and pension investments. Second, to the extent to which managing climate change may require the redirection of private investment to either more carbon-responsible practices, or simply towards adaptive industries and green technologies, finance authorities also may have a role through nodality and treasure based policy instruments in encouraging new priorities for the investment community.

While the links between these aspects of the climate change issue and particular agencies (Figure 2) is an over-generalization, it is important to note that these different issues speak directly to the continuum of sectoral integration discussed above. Issues that logically “fit” the mandate of a single agency in the federal finance ensemble, given that agency’s existing role, seem to fit the existing apparatus for “integration” in the sector – such as is the case for prudential regulation relating to climate change risks. Broader issues, those that require new collaboration inside and out of government may raise challenges from an integration perspective, depending on how those challenges cut across existing organizational mandates. For example issues relating to private investment concerns are likely to be tackled in poorly integrated environment as these cross federal/provincial jurisdictional lines and would require new collaborative mechanisms with the private sector.

What all this suggests is that while the integration of governance arrangements matters in assessing policy capacity,

we need to balance that against an analysis of the problems confronting that sector.

Fig. 2 - Finance Sector Issue Structure and Key Agencies



In a sense, this is a bit obvious in that it amounts to saying that government’s policy capacity is likely to be more effective where problems “fit” existing responsibilities.

Assessing Analytical Capacity – Lessons from the Survey Data

As alluded to above, assessing “analytical capacity” is a bit nebulous. On the surface, it seems reasonable to suggest that analytical capacity on financial services issues is quite high, at least at the federal level. A review of the budgets of key federal agencies suggests that the Department of Finance, OSFI and the Bank of Canada should all have considerable capacity in terms of staff resources etc. - OSFI’s budget for monitoring the financial industry was over \$90 million in 2011. Furthermore, the policy advice and support offered to Finance by the Bank of Canada and OSFI seems particularly valuable in that staff are encouraged to see themselves as serious researchers (Bank staff are notable for

publishing their own research findings). These agencies’ budgets have grown considerably over the last decade.

On top of this, several recent survey projects have illustrated that policy staff in central agencies have considerably more “capacity” in terms of their training, education, time and research competencies to engage in more sophisticated policy analysis than is the case for other types of government agencies (See for example, Wellstead et al. 2009). Indeed these kind of “cognitive” capacities for policy analysis seem to be much higher in the larger, more formalized “policy shops” that exist in the Federal Government’s central agencies. On the other hand, there is considerable reason to question the provinces’ analytical capacity (Howlett and Newman 2010).

In theory this general pattern should be pronounced in the finance sector. While provincial finance ministries are quite large and well staffed, their mandates are much narrower than the federal Department of Finance, and they are not supported by the high quality satellite agencies charged with particular policy roles that serve the federal government – provincial securities regulators, for example, in some instances are virtually “shell” organizations with little permanent staff and analytical capacity. Indeed survey data collected tends to support this conclusion.³ Generally, Provincial officials are not as well educated, are less likely to have training in the social sciences and policy analysis, and are broadly more likely to have a background in business administration (this is not true of those who work in finance agencies specifically, though the samples get quite small for that category in any event) – See Williams 2011b for a detailed discussion of federal-provincial differences.

General observations aside, what is most interesting to note from the survey data is that while analytical capacity might be high in federal finance circles, awareness of, or attention to climate change issues is actually lower than is the case of Canadian policy professionals broadly – a concerning result given the central importance of finance on these issues.

Assessing the Data:

Firstly, as one would expect, finance officials (both federal and provincial), tend to be more highly trained than non-finance officials – suggesting higher analytical capacity. They are more likely to have a graduate or professional degree (Table 1), are more likely to have done policy-specific post-secondary course work (Table 2) and likely to have more content specific educational training for their responsibilities in finance given that they are more likely to have trained in the social sciences or business administration

**Table 1
Education levels in the Public Service**

	Non-Finance	Finance
High School	1.14%	5.36
College-Tech School	8.24%	5.36%
University	32.39%	25.00%
Graduate or professional degree	58.24%	64.29%

Table 2
Number of Post-Secondary Policy-Specific courses undertake

	Non-Finance	Finance
None	38.53%	28.85%
One	11.76%	9.62%
Two	13.82%	11.54%
Three or More	35.88%	50.00%

Table 3
Differences in Type of Education

	Non-Finance	Finance
Business or Administration	7.81%	25.51%
Computing Science	1.30%	0.00%
Fine Arts/Humanities	2.60%	1.02%
Journalism	0.93%	1.02%
Engineering	7.06%	3.06%
Law	1.49%	6.12%
Natural Sciences	32.53%	1.02%
Social Sciences	14.13%	19.39%

*Numbers do not add up to 100% because of non-response

Table 4
Level of Concern About Climate Change

	Non-Finance	Finance
How concerned are you personally about climate change?	3.998	3.542
How concerned is your department or agency about climate change?	3.845	2.97
Compared with other issues that your department or agency deals with, how much of a priority are issues related to adaptation to climate change?	3.16	2.239
Overall, how would you rate your department or agency's capacity to deal with adaptation to climate change?	2.287	2.594
How relevant are issues related to climate change adaptation to your daily work?	3.37	2.015
How relevant are issues related to climate change adaptation to the mission of your department or agency?	3.796	2.478
How relevant are issues related to climate change adaptation of the daily operations of your agency or department?	3.236	2.212
Does your department or agency's work help to increase capacity to adapt to climate change?	3.824	2.507

Numbers reflect mean rating per group on 1-5 scale, where 1=not at all concerned and 5=very concerned

Table 5
Familiarity with and Attitudes Towards Climate Change

	Non-Finance	Finance
I understand the concept of adaptation to climate change	4.27	3.64
I understand the key issues surrounding adaptation to climate change	4.05	3.34
Information regarding adaptation to climate change is readily available to me	3.76	3.25
The body of knowledge regarding adaptation to climate change is growing	4.07	3.82
Climate change is affecting policy decisions in my organization	3.53	2.58
Information regarding adaptation to climate change is understood within my organization	3.18	2.54
There is an increased desire for information regarding adaptation within my organization	3.44	2.43
Within my organization there exists a general consensus regarding the need for adaptation	3.39	2.41
My organization is more aware of adaptation to climate change issues than 3 years ago	3.81	2.85
Mitigation should be considered part of a larger adaptation strategy	3.92	3.25
International agreements will affect domestic adaptation policies	.	.
Adaptation will require changes in citizen behaviour	.	.
Policies should be harmonized across jurisdictions	.	.

Numbers reflect mean use rating per group on 1-5 scale, where 1=strongly disagree and 5=strongly agree

"." Reflects no significant difference

than is the case for policy professionals generally. That said, it is interesting to note that while almost 33% of officials have an educational background in the natural sciences, in finance this is true of only 1% (See Table 3). This may help explain the low awareness of climate change adaptation challenges in the sector. While previous survey projects have taken this type of evidence to suggest that analytical capacity is likely higher in finance agencies, much like the discussion of governance arrangements above, once we focus on a specific issue, like climate change adaptation, the results are more complicated. Indeed, the starkest findings in the survey relate to the gap between finance officials and non-finance officials on awareness of, engagement in, and concern about, climate change adaptation issues. For example, in assessing the level of concern about climate change (Table 4), while finance officials are more confident than other officials that their agencies *could* deal with adaptation questions, they tend to see the issue as being less important to themselves and to their agency - something revealed in the

case study as well (below). Furthermore their knowledge about climate change issues is lower; they are more skeptical about climate change knowledge and are less positive about the extent to which finance organizations are dealing with that knowledge (Table 5).

Indeed, when examining the information sources used by officials in their policy work, again there are interesting differences between non-finance and finance officials. While non-finance officials are far more likely to use “scientific findings” and “academic research” in their analysis, finance officials rely more heavily on “personal experience”, “opinions” and “reports from industry” (Table 6). Perhaps most importantly, while 70% of non-finance officials report having some direct involvement in climate change related policy work, only 17% of finance officials report the same (Insert Figure 3).

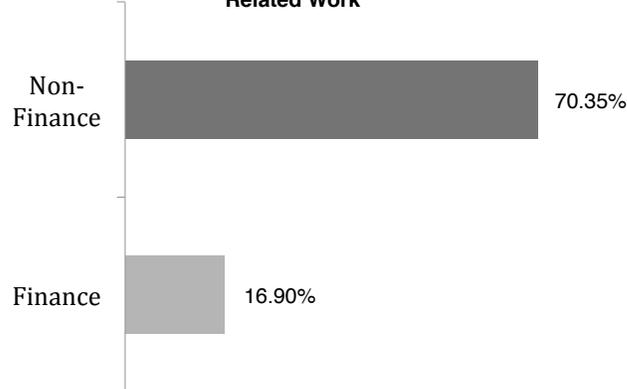
Table 6
Types of Information Sources Used in Policy Work (both Climate-Related and not)

	Non-Finance	Finance
Academic Research	3.24	2.73
Budget and Cost Data	.	.
Conference Presentations	.	.
Government Platforms	.	.
Newspapers and News magazines	2.89	3.66
Personal Experience	3.5	3.94
Personal Opinion	3.02	3.39
Professional Advice	.	.
Reports from Consultants	.	.
Reports from Foreign Governments	.	.
Reports from Industry	2.56	2.96
Reports from NGOs	.	.
Reports from other domestic gov	.	.
Reports from Think Tanks	.	.
Reports produced within your gov	.	.
Results of formal evaluation	.	.
Scientific Findings	3.12	1.78
Survey data	.	.
Workshops	2.58	2.34

Numbers reflect mean use rating per group on 1-5 scale, where 1=never and 5=daily

"." Reflects no significant difference

Figure 4: Involvement With Climate Change-Related Work



What emerges from this data? Albeit based on a relatively small sample, it tends to confirm the general sense that analytical capacity is high in the finance sector; however very little of that capacity is actively engaged in climate change related policy work. Indeed the data seems to suggest that finance officials, more commonly trained in business and public administration, with little connection to the natural sciences, tend to be skeptical of the importance of adaptation as a major policy concern in their domain. Much like the case above with assessing the integration of governance arrangements, it seems reasonable to suggest here that analytical capacity in finance, although generally high, will be lower on issues that are well outside of existing competencies - for example issues that require more scientific knowledge about likely climate impacts.

The Micro Context – the Office of the Superintendent of Financial Institutions (OSFI)

As the survey data reveals, suggesting that analytical capacity in finance should be high, given staff levels etc., does not really tell us much about analytical capacity in relation to climate change *per se* as these agencies have large analytical mandates to begin with. In order to “get at” climate change capacity in particular, an examination of OSFI’s climate change related activities seems to suggest that when there is a clearly recognized adaptation problem in the finance sector, and that problems can be handled in a well integrated policy environment where agencies’ existing mandates “fit” the task at hand, climate change capacity appears to be “effective”.

As Canada’s prudential regulator, OSFI is primarily responsible for assessing risks in relation to firms’ financial holdings and certain kinds of financial assets. OSFI is not only responsible for making sure banks are sufficiently covered against risk in their portfolios, but also that insurance companies are sufficiently covered against potential liabilities and for assessing the long term soundness of pension funds. In recent years the range of “risks” OSFI has ostensibly been monitoring has expanded. For example, in the wake of 9/11, OSFI became involved in monitoring “terrorist

financing". More recently, OSFI has also been increasingly monitoring prudential risks associated with climate change adaptation.

Ideas about the risks posed to pension funds and insurance companies due to climate change have been circulating for some time; and have generated considerable international public and private attention. Indeed the issue is relatively straightforward – rapid climate change or increased climatic instability creates new prudential risks for firms over exposed to certain kinds of activities – for example a regional insurance company overly involved in agricultural insurance, could be at serious risk over the long term as climate change challenges existing agricultural practices (See Hecht 2008 for a discussion). This requires that prudential regulators take these types of concerns into consideration in their ongoing oversight of private firms.

Since 2007 OSFI's various annual reports and industry assessments have made increasingly frequent mentions of the prudential risks associated with weather risks associated with climate change – indeed OSFI is monitoring these concerns within its oversight on the insurance and pension industries.⁴ Mirroring OSFI's new responsibility for monitoring terrorist financing the organization has added climate change risks to its list of concerns – indeed climate change adaptation concerns, with their focus on "risks" to firms and whole sectors, should neatly fit the existing analytical activities of the organization. On top of this OSFI's budget has grown considerably in recent years to help it deal with its generally expanding mandate. Where once OSFI was seen as an underfunded and ineffective organization, its budget has more than doubled between 1996 and 2009. Indeed OSFI has devoted ever-increasing resources to assessing insurance industry and pension fund risk in particular – which could help provide the additional analytical capacity necessary to monitoring climate risks.

That said, it is not clear how serious OSFI's activities are in this area. OSFI may mention these concerns in its broader reviews of financial assets, and in some sense seems to believe the issue is being "dealt with" as far as OSFI's mandate requires. However, it is very difficult to get anyone at OSFI to actually speak about climate change issues and the risks they pose for the industry. For example, in response to requests for more information about OSFI and climate change, staff re-direct inquiries to the Institute for Catastrophic Loss Reduction, a private sector funded not for profit research organization that has published some work documenting industry risks due to climate change as OSFI has no reports or documents that outline their own concerns; OSFI has not developed any sort of concrete policy statement outlining how to assess risks in relation to this issue. Thus, despite annual report mentions to climate change risks, OSFI seems to lack accurate information about how to assess these risks, something also implied by the terminology used by the Superintendent. There are no "products" that can be identified demonstrating a serious level of engagement with the issue. Indeed, given OSFI's penchant for *ad hoc* relational regulation, taking the peculiarities of each firm's situation in a different light, guidelines are unlikely in

any event. This does make it difficult to judge the scope of their analytical activities in this area however.

Equivocation aside, on the surface it appears we have an agency confronting a clearly identifiable and new problem which fits within the responsibilities it has been assigned within the federal finance ensemble; an agency which has considerable existing analytical capacity for assessing risk; capacity that has expanded in recent years, and an agency which claims to be monitoring the problem. While this suggests governance arrangements on this issue are good, mirroring the general data (above) on analytical capacity in the finance sector, the situation at OSFI also seems to suggest that the issue is conceptually difficult for finance officials to deal with, given their experience and training which connect poorly with the natural-science properties of the climate change adaptation debate.

Conclusion

What conclusions can be drawn about policy capacity in the finance sector in relation to climate change based on the available evidence and how does this speak to the difficulty of operationalizing capacity? As suggested by Figure 1, effective policy capacity requires that there be both sufficient analytical capacity to assess the challenges confronting a policy sector and good integration in governance arrangements in order to ensure that analytical capacity is well utilized. In the case of OSFI and its responsibility for overseeing risks to the financial sector, both of these conditions seem to exist in theory. Climate change risks clearly fit the existing responsibilities and lines of accountability in relation to this kind of prudential oversight at the federal level. Analytical capacity seems to be high across the finance sector generally, and significant new resources have been allocated to OSFI in recent years. There is a perceived policy problem in the sector, and the officials responsible for it claim to have the information they need to deal with the problem. Though as the data suggests above, financial officials at generally do not seem to be taking the issue very seriously, even relative to private sector think tanks. All of this seems to suggest that the properties of the issue itself, both how it challenges existing governance arrangements and how it may challenge the analytical skills and orientations of administrators, is important in assessing capacity.

Furthermore, on other climate change related policy challenges, finance governance arrangements are not well integrated, particularly those that cross into areas of provincial jurisdiction, and while analytical capacity may be high in general, the available survey data suggests that finance officials have a low awareness of climate change issues and are rarely involved in policy work that addresses these challenges – policy capacity also depends on the properties of the problem itself.

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Endnotes

- 1 Indeed in the mismanagement of the regulation of the securities at the centre of the \$32 billion Asset Backed Commercial Paper market collapse exposed by the global financial crisis, there has been considerable finger-pointing and accusations by both levels of government, highlighting how broken the arrangements are in that sector (Williams 2011).
- 2 See for example the analysis done by the United Nations Environment Program Finance Initiative.
- 3 The survey, completed in 2010, was directed to government policy analysts and administrators working in federal and provincial government policy analysis. Aside from examining the officials' knowledge of climate change adaptation challenges, it also sought information on their research experience, competencies, educational backgrounds and most interestingly, the organization of their policy related research activities in government. A total of 636 officials completed the survey, of which 185 (29%) worked for the federal government. Within the overall total, 15% of the respondents self-identified as working in a "finance-related" agency.
- 4 See for example the 2007-2008 annual report.