

POLICY ADVICE IN MULTI-LEVEL GOVERNANCE SYSTEMS: SUB-NATIONAL POLICY ANALYSTS AND ANALYSIS

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Despite the existence of a large body of literature on policy analysis, empirical studies of the work of policy analysts are rare, and in the case of analysts working at the sub-national level in multi-level governance systems, virtually non-existent. Many observers decry the lack of even such basic data as how many policy analysts work in sub-national government, on what subjects, and with what effect. This is true in many countries, for example, the U.S., Germany, and Canada, all federal systems with extensive sub-national governments but where what little empirical work exists focuses on government at the national level. In most cases, in justifying their observations and conclusions observers rely on only one or two quite dated works, on very partial survey results, or on anecdotal case studies and interview research. This article reports the findings of a 2008-2009 survey aimed specifically at examining the background and training of provincial policy analysts in Canada, the types of techniques they employ in their jobs, and what they do in their work on a day-by-day basis. The resulting profile of sub-national policy analysts presented here reveals several substantial differences between analysts working for national governments and their sub-national counterparts, with important implications for training and for the ability of nations to accomplish their long-term policy goals.

Key Words: policy advice systems, policy analysis, sub-national policy analysts

INTRODUCTION

The Supply and Demand for Policy Analysis in Government¹

Policy analysis is a subject that has not suffered from a dearth of attention. Many journals and specialized publications exist on the subject and specialized graduate schools operate in many countries, states, and provinces (Geva-May and Maslove 2007; Jann 1991). Studies have examined many hundreds of case studies of policy-making in numerous countries and many texts describe in detail both the various analytical techniques expected to be used in public policy analysis (Weimer and Vining 2004) and the nuances of the policy-making processes

(Howlett, Perl and Ramesh 2009).

However works examining the “supply and demand” for policy analysis in government are much rarer (Nutley, Walter and Davies 2007). And where these exist they almost always focus on the “demand” side of the policy advice market, examining the strengths, weaknesses, and other characteristics of the knowledge utilization process in government (Weiss and Bucuvalas 1980; Weiss 1992; Rich 1997; Pollard 1987; Beyer and Trice 1982; Innvaer et al. 2002). Work on the behavior and behavioral characteristics of in-house policy analysts in supplying advice to government, let alone those working outside it, are exceedingly rare (Nelson 1989; Aberbach and Rockman 1989; Wollmann 1989; Thompson and Yessian 1992; Radin 1992; Boston 1996; Bushnell 1991; Binz-Scharf,

Lazer and Mergel 2008).²

Given the significance of public sector analysts in the policy advice system of government, studies of their activities, behavior, and impact should be a staple of the study and evaluation of policy analysis. While there is certainly no lack of studies that urge certain techniques or practices on professional bureaucratic policy analysts (see for example, Dunn [2004] Patton Sawicki [1993]; MacRae and Whittington [1997] and many others), in most countries empirical data on just about every aspect of policy analysis in government are lacking.³

This situation has led many observers both inside and outside government to decry the lack of even such basic data as how many policy analysts there are in government, working on what subjects, and with what techniques (Behm, Bennington and Cummane 2000; Bakvis 1997; Hunn 1994; Weller and Stevens 1998; Waller 1992 and 1996; Uhr and Mackay 1996; State Services Commission 1991 and 1996).⁴

As Radin and Colebatch concluded in their 2006 survey of international practices:

(1) “We need more empirical research on the nature of policy work in specific contexts: how policy workers (and which sort) get a place at the table, how the question is framed, what discourse is accepted as valid, and how this work relates to the outcome at any point in time; (and)

(2) What sort of activity do practitioners see as policy work, and what sort of policy workers do they recognize?”

The Sub-National Case: Provincial Policy Analysts in Canada

This general situation is true of most countries. However, even where some little work has been done on the subject, serious gaps remain in our knowledge of bureaucratic policy analysts. If information on national or central governments is weak, the number of studies that focus on sub-national units in countries with multi-level governance systems can be counted on one hand (Larsen 1980; Hird 2005).

This latter point is a substantial issue for the study of policy advice systems and professional policy analysis in many federal countries, such as Brazil, Mexico, Australia, and the U.S, where as many as 50% of traditional bureaucratic policy analysts may work for sub-national state or provincial governments. In these multi-level systems, sub-national governments control

many important areas of policy-making, including health, education, social services, local government and land, resources, and the environment, and exercise controlling interest over policy development and implementation in these areas (Bache and Flinders 2004; Hooghe and Marks 2001, 2003).

Both these situations are true in Canada, where studies of policy analysts have traditionally focused almost exclusively at the federal level (Voyer 2007; Prince 1979; Prince and Chenier 1980; Hollander and Prince 1993) despite the fact that the provinces control many important areas of social, economic, and political life. This situation only began to change in 2006-2007 when studies of non-governmental policy analysts (Dobuzinskis, Howlett and Laycock 2007) and of regional and central policy analysts employed in the federal civil service appeared (Wellstead, et al).

These studies have revealed a very different set of policy supply practices than those suggested by studies in other jurisdictions, highlighting, for example, significant differences in the attitudes and activities of federal analysts in Ottawa versus those in the regions, and the generally poorer policy capacity of regional organizations (Howlett 2009). Regionally based policy analysts working for the federal government, for example, were found to be more commonly engaged in “street-level” advice oriented towards day-to-day firefighting, while the analysts in Ottawa engaged in more “high-level” and long-term strategic planning. The kinds of skills and information sources required for each set of analysts were thus found to vary substantially. Such findings have refined and called into question many of the assumptions that went into policy capacity enhancement activities undertaken in the country since the publication of the Fellegi Report in 1996 (Fellegi 1996; Bakvis 2000; Aucoin and Bakvis 2005; Riddell 2007; Anderson 1996).

However, while these are important insights, given Canada’s very de-centralized federal system of government, approximately half of the more than ten thousand bureaucratic policy analysts employed in the country are working at the sub-national level in the civil services of the ten provinces and three territories. Information on analytical activities and the supply of policy advice at this level remains extremely rudimentary, generated exclusively from personal reflections and anecdotes of former analysts and managers, or from a small number of single-province interviews or surveys (McArthur 2007; Rasmussen 1999; Singleton 2001; Hicks and

Watson 2007; Policy Excellence Initiative 2007).

In order to correct these problems, in 2008-2009 a survey similar to Wellstead et al, Stedman and Lindquist's (2007) was made of policy analysts at the provincial level. This survey was designed specifically to examine the background and training of provincial policy analysts, the types of techniques they employed in their jobs, and what they did in their work on a day-by-day basis. It was intended to assess the extent to which, following Wellstead et al., provincial civil servants, too, fell into the categories of trouble-shooters vs planners in terms of their day-to-day activities and orientations.

The results of the survey are presented below in the form of a profile of provincial policy analysts, following a brief discussion of the methodology employed in the survey work.

METHODS

The personal and professional components of the policy advice supply system, along with their internal and external sourcing, are combined in different ratios in different countries. However, as Halligan (1995) has noted:

The conventional wisdom appears to be that a good advice system should consist of at least three basic elements within government: a stable and reliable in-house advisory service provided by professional public servants; political advice for the minister from a specialized political unit (generally the minister's office); and the availability of at least one third-opinion option from a specialized or central policy unit, which might be one of the main central agencies (p. 162).

As Halligan also notes, however, "the emphasis on elements such as the role of political operatives depends very much on whether [they] are accorded seniority within the system of government," a practice that is a feature of the U.S. system but "less so in other countries" (p. 162). In other words, the primary component of the policy advice supply system in many countries is comprised of what Meltsner (1975) first identified as "bureaucratic policy analysts." It is these professional policy advisors in the civil service who were the target of this study.

A survey of policy analysts employed by provincial civil services was carried out in November and

December of 2008 using an online commercial software service. It involved the completion of a 64-item questionnaire by more than 1,200 provincial and territorial civil servants situated in seven jurisdictions.

Mailing lists for the survey were compiled wherever possible from publicly available sources such as online government telephone directories, using keyword searches for terms such as "policy analyst" appearing in job titles or descriptions. In some cases additional names were added to lists from hard-copy sources such as government organization manuals. In other cases lists or additional names were provided by provincial public service commissions, who also checked initial lists for completeness and accuracy.⁶

Lists were compiled for as many provinces and territories as possible, with the aim of obtaining comprehensive lists for at least one major Canadian province, at least one mid-sized jurisdiction, one smaller jurisdiction, and at least one territory. From 2,846 valid email addresses in seven jurisdictions, 1,258 valid survey completions were gathered for a total response rate of 44.2%.

THE PROFILE OF PROVINCIAL POLICY ANALYSTS

The data collected from the survey allowed a profile of provincial public servants to be constructed for the first time. Data were divided into five topic areas: Demographic Characteristics and Job Experience; Education and Training; Day-to-Day Duties; and Techniques and Data Employed. Combined, these provide the basis for the first large-scale empirical analysis of the background and activities of sub-national government policy analysts.

Demographics and Job Experience

Basic demographic data were collected on provincial policy analysts in terms of characteristics such as gender and age. The responses revealed that provincial analysts are predominantly (60%) female, and fairly young in that almost 70% are under 50 years of age and over 40% under 40 years old. Additional questions revealed that provincial analysts also tend to have come to their present career path and positions fairly recently. Over 40% of provincial analysts had been involved in professional policy analytical activities for five years or

Table 1. Length of Time ...

	...Employed as a Professional Policy Analyst		...Employed in present organization		...Expected to Remain in Present Position	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Valid	11	.9	6	.5	21	1.7
00-01 years	62	4.9	184	14.6	154	12.2
01-05 years	457	36.3	537	42.7	675	53.7
06-09 years	250	19.9	196	15.6	134	10.7
10-14 years	158	12.6	92	7.3	174	13.8
15-20 years	153	12.2	112	8.9	58	4.6
20 or more	167	13.3	131	10.4	42	3.3
Total	1258	100.0	1258	100.0	1258	100.0

less (Table 1).

Almost 60% had also been in their present organizations for less than five years, including 15% for less than one year. This contrasts sharply with the federal situation described by Wellstead et al. (2007) where a majority of analysts are male and a sizable number have been in their positions for over 20 years.

Finally, these analysts also do not expect to stay very long in their current positions, with two-thirds expecting to stay less than five additional years. This pattern accords closely with Meltsner's (1975) observation that the typical policy analyst believes he or she is upwardly mobile and "believes he (sic) is a short-timer, so he does not worry about maintaining the agency or conserving its

jurisdiction" (p. 117), and instead is able to be more "problem-focused" in orientation and approach.

Education and Training

A second set of questions examined the background education and training of provincial analysts. Table 2 highlights the generally very high level of formal education attained by this group of civil servants, with 57% having at least some graduate or professional education and fully 95% attaining university-level credentials.

Provincial analysts' study areas of expertise are quite varied but heavily oriented (over 80%) towards the

Table 2. Education

	Frequency	Percent
Valid	93	7.4
High School	24	1.9
College or Technical	58	4.6
University	371	29.5
Graduate or Professional	712	56.6
Total	1258	100.0

Table 3. Degree Subject Area

	N	Percent
Business Management	166	13.2%
Education	56	4.5%
Engineering	30	2.4%
Humanities or Fine Arts	66	5.2%
Law	86	6.8%
Natural Sciences	85	6.8%
Planning	58	4.6%
Public Administration	121	9.6%
Political Science	208	16.5%
Economics	145	11.5%
Sociology	106	8.4%
Geography	85	6.8%
Other Social Sciences	126	10.0%
History	74	5.9%
English	57	4.5%
Other Arts or Humanities	31	2.5%
Public Policy	87	6.9%
Medicine	6	.5%
Other Health Sciences	37	2.9%
Computing Science	20	1.6%
Languages or Linguistics	28	2.2%
Communications or Journalism	25	2.0%
Environmental Studies	85	6.8%
Natural Resource Management	42	3.3%
Total	1258	100.0%

social sciences (see Table 3). The five leading degree fields were Political Science with 16.5%, followed by Business Management with 13.2%; Economics with 11.5%, Public Administration with 9.6% and Sociology with 8.4%. These five fields accounted for 48% of degrees (allowing for multiple degrees) held by analysts, while a wide range of other social science, law, and humanities credentials accounted for another 40%. Health Sciences, Computer Science, Engineering, and Natural Science degrees made up only 12% of analysts' credentials. Both of these findings resemble the patterns found by Wellstead et al. at the federal level.

As for previous work experience, provincial analysts have varied backgrounds but tend to be recruited from academic institutions (22%) or to have come up through their own provincial government, with 44% citing

previous work experience in this area. Less than 13% claim experience in the federal government and 9% in another provincial government (see Table 4).

Another 11% cite experience at the municipal level and 6% experience in another country. Just over 55% cite any experience outside government, 17% in the not-for-profit sector and 22% in academia. Only 17% cite private sector experience. This is a much lower figure for private sector experience than is found at the federal level, and a much higher figure for not-for-profits.

Regardless of their work experience and academic background, however, provincial analysts tend to have had little training in formal policy analysis, either in their post-secondary educational career or in post-employment training.

As Table 5 shows, 41% of analysts never took a

Table 4. Previous Work Experience

	N	Percent
Academia	278	22.1%
Municipal government department or agency	143	11.4%
Not-for-profit sector	316	25.1%
Private sector	211	16.8%
Other provincial government department or agency in your current province	549	43.6%
Department or agency in another provincial government	111	8.8%
Federal government	157	12.5%
Department or agency in another country	73	5.8%
Total	1258	100.0%

Table 5. Number of Post-Secondary Policy Courses Completed

	Frequency	Percent	Cumulative Percent
Valid	124	9.9	9.9
0	519	41.3	51.1
1	113	9.0	60.1
2	118	9.4	69.5
3+	384	30.5	100.0
Total	1258	100.0	

Table 6. Completion of Post-Secondary Policy Analysis Courses

	Frequency	Percent	Cumulative Percent
Valid	86	6.8	6.8
No	723	57.5	64.3
Yes	449	35.7	100.0
Total	1258	100.0	

single policy-specific course at the post-secondary level and 60% have taken two or fewer policy-related courses. Moreover, as Table 6 shows, close to 60% of analysts have never completed a post-secondary course specifically dealing with formal policy analysis or evaluation.

Another possible source of training, of course, is internal, government-provided training. However, as Table 7 shows, about the same proportion of provincial

analysts (55%) have also never completed any formal internal governmental training on these subjects.

Also, as Table 8 reveals, by far the most common form of post-employment “training” is attendance at policy-related conferences, workshops, or forums. Only 10% of provincial analysts cited completion of policy courses with government-run or sponsored training institutes, while another 20% cited completion of policy-relevant courses at a university or college. The former

Table 7. Completion of Formal Internal Training Courses

	Frequency	Percent	Cumulative Percent
Valid	104	8.3	8.3
No	697	55.4	63.7
Yes	457	36.3	100.0
Total	1258	100.0	

Table 8. Sources of Post-Employment Training

	Included	
	N	Percent
Attended policy related conferences	805	64.0%
Attended policy workshops or forums	940	74.7%
Completed public administration, political science, economics, or other policy-relevant courses at a university or college	246	19.6%
Completed policy courses with the Canada School of Public Service or any other government-run or government-sponsored training institute	123	9.8%
Total	1258	100.0%

figure, in particular, is much lower than at the federal level.

Day-to-Day Duties

What do these sub-national analysts do in their day-to-day jobs? First, they tend to work in small groups, as

almost 90% work in formal policy units. This is in keeping with the recommendations of many government reports that analysts should be clustered rather than separated or isolated in departments (Fellegi 1996; Hawke 1993; State Services Commission 1991).

These units are located overwhelmingly in the provincial capital with 78% of respondents indicating a

Table 9. Work

		... in Provincial Capital		... Within own government	
		Frequency	Percent	Frequency	Percent
Valid	Never	52	4.1	68	5.4
	Annually	51	4.1	67	5.3
	Quarterly	71	5.6	138	11.0
	Monthly	58	4.6	267	21.2
	Weekly	36	2.9	446	35.5
	Daily	983	78.1	261	20.7
	Total	1251	99.4	1247	99.1
Missing		7	.6	11	.9
Total		1258	100.0	1258	100

very high frequency of daily activities in the capital (see Table 9).

As for the activities carried out in these units, most analysts are still quite isolated in that they work almost exclusively within their own government. Eighty percent of analysts report no daily interactions on issues related to international government, 65% few or infrequent interactions with local governments, and 50% infrequent interactions with the federal or other provincial or territorial governments. Fifty-six percent, however, report very frequent, daily, or weekly interactions with other ministries within their own government (see Table 9).

These units are also small. As Table 10 shows, 60%

of analysts work in units of fewer than 10 employees and about 30% in units of fewer than five full-time equivalent employees. And, as Table 10 also shows, 50% of these units have fewer than five people actually working on policy issues.

As for the nature of the issues upon which they work, about 40% of analysts report fairly frequently working on issues that are ongoing for more than a year, about the same proportion as report as frequently working on issues that are ongoing for between 6-12 months and between 1-6 months. Fifty percent, however, report frequently working on issues that can be resolved in less than a month, while about 60% report working on issues and problems that demand immediate attention (i.e.,

Table 10. Number of FTEs

	... Working in Policy Unit		... Working in Unit on Policy Issues	
	Frequency	Percent	Frequency	Percent
Valid	15	1.2	14	1.1
01-05	344	27.3	619	49.2
06-10	426	33.9	399	31.7
11-20	304	24.2	164	13.0
21 -50	138	11.0	47	3.7
50 plus	31	2.5	15	1.2
Total	1258	100.0	1258	100.0

Table 11. Frequency of Work on Short-Term Issues

		Frequency	Percent
Valid	n/a	33	2.6
	Never	40	3.2
	Annually	45	3.6
	Quarterly	89	7.1
	Monthly	182	14.5
	Weekly	432	34.3
	Daily	299	23.8
	Total	1120	89.0
Missing		138	11.0
Total		1258	100.0

Table 12. Description of Policy Role(s)

	Included	
	N	Percent
Advisor	969	77.0%
Analyst	1025	81.5%
Communications Officer	193	15.3%
Coordinator	551	43.8%
Director	118	9.4%
Evaluator	269	21.4%
Liaison Officer	191	15.2%
Manager	224	17.8%
Planner	318	25.3%
Researcher	581	46.2%
Public Participation Expert	90	7.2%
Program Analyst	332	26.4%
Program Manager	127	10.1%

“firefighting”) on either a daily or weekly basis (see Table 11).

This finding about the prevalence of short-term work at this level of government is one that is often decried in the existing literature on the subject (Gregory and Lonti 2008), but can also be considered to be a primary “raison d’être” of the policy bureaucracy. As Hawke (1993) put it:

Fire-fighting is part of the job of any manager and is especially prominent in the public service because of the pressures on ministers. *It is worth remembering that a key reason for having departmental policy advice agencies rather than distinct contracts for each piece of policy development is the desirability of immediate and unplanned access to informed advice* (p. 64) [italics added].

Techniques and Data Employed

What analytical techniques do provincial policy analysts employ and with what information sources? First it is important to note that provincial policy analysts think of their jobs as involving the development of analysis services in order to provide advice (analysis) to governments. As Table 12 shows, 82% of analysts

describe their role as either “analysis” or “advice provision”. Only 46% think of themselves as “researchers,” slightly more than the percentage who think of themselves as “co-ordinators.”

These findings are very similar to those reported by Radin (1992) in her study of role descriptions found in the U.S. Department of Health and Human Services, and highlight the existence of several general types of analysts working at this level: Researcher/Analysts, Evaluators, Co-ordinators, and Managers; with the former three groups each equal to about half the size of the cohort of Researcher/Analysts.

This structure is borne out by the general kinds of tasks conducted at this level, with less formal duties such as environmental scans and issue tracking outweighing more technical financial or legal tasks, and with all analysts involved in the development of ministerial briefing notes that outline options and provide advice to governments (see Table 13).

The primary analytical techniques used in these activities are also generally more informal than formal. Eighty-four percent of respondents (Table 14) claim to be involved in “brainstorming”, followed by about 70% in “consultation” and 60% in using “checklists”. Cost Benefit Analysis is the only formal technique to attain

Table 13. General Policy Tasks Undertaken

	Included	
	N	Percent
Department or agency planning	550	43.7%
Environmental scans/Issue tracking	860	68.4%
Legal analysis	332	26.4%
Preparing Budget/Treasury Board submissions	481	38.2%
Ministerial briefing	896	71.2%
Networking	825	65.6%
Preparing briefing notes or position papers	1095	87.0%
Providing options on issues	1064	84.6%
Undertaking research and analysis	1089	86.6%
Providing advice	1081	85.9%
Total	1258	100.0%

Table 14. Specific Analytical Technique(s) Used

	Included	
	N	Percent
Brainstorming	1054	83.8%
Consultation exercises	859	68.3%
Focus groups	468	37.2%
Free-form gaming or other policy exercises	82	6.5%
Problem-mapping	393	31.2%
Checklists	744	59.1%
Decision/probability trees	300	23.8%
Expert judgments and elicitation	603	47.9%
Development of sophisticated modeling tools	150	11.9%
Markov chain modeling	10	.8%
Monte Carlo techniques	20	1.6%
Process influence or social network diagrams	101	8.0%
Scenario analysis	633	50.3%
Cost-effectiveness analysis	538	42.8%
Cost benefit analysis	686	54.5%
Environmental impact assessment	348	27.7%
Financial impact analysis	91	7.2%
Preference scaling	765	60.8%
Risk analysis	200	15.9%
Robustness or sensitivity analysis	0	.0%
Total	1258	100.0%

use by over 50% of respondents, only slightly higher than other less formal techniques such as expert elicitation (48%) and scenario analysis (50%). While this pattern goes against the instructions and admonitions of many textbooks, it is in keeping with the findings of many utilization studies which have found a distinct preference for the use of “simple” tools vs complex ones on the part of both the producers and consumers of policy analysis (Sabatier 1978; Nilsson et al. 2008). It also suggests, again, that analysts fall into several distinct types which favor the use of specific analytical techniques.

CONCLUSION

Empirical research into the sub-national level in the Canadian case presented here reveals that many more analysts fall into the category of short-term, project-oriented “troubleshooters” than the long-term strategic “planners” many have thought them to be, based on incorrect inferences drawn from studies of national officials. Provincial analysts, like their federal counterparts, are highly educated, relatively young and mobile. But they do not tend to have a great deal of formal training in policy analysis and mainly work in small units deeply embedded in provincial ministries. They tend to work on a relatively small number of issue areas, often on a “fire-fighting” basis and, like their federal counterparts in the regions, a large percentage of analysts can be thought of as a kind of cadre of internal experts who can be brought into problem areas – a free floating “brain trust” of internal “consultants” available to work on pressing and troubling policy issues.

In terms of the six styles of policy analysis identified by Mayer, Bots and van Daalen (2004) in their comparative study of policy analytical styles, the predominant sets of analysts identified in the sub-national analysis reported above can be thought of as providing strategic advice as well as design and recommendation, or as working in a “client-advice” style somewhat removed from both the traditional “rational” style promoted by textbook and policy schools, and in the more “interactive” or “participatory” styles identified by more recent national studies (Banfield 1977; Lindblom and Cohen 1979; Baehr 1981; Shulock 1999; Adams 2004). Their short-term orientation, relative inexperience, high levels of job mobility, and lack of training in formal policy analytical techniques also sets

them apart from their national counterparts and has significant implications for policy design and efficacy in multi-level states.

These findings are important not only to critics and theorists outside of government institutions who wish to better understand the operation and functioning of policy advice systems, and especially these systems’ professional bureaucratic component, but also to those inside the system who wish to better assess and evaluate such activities in order to improve training and recruitment practices, enhance analysis and, ultimately, improve policy outcomes (Mintrom 2003; ANAO 2001; State Services Commission 1999; Di Francesco 1999 and 2000). New sets of studies based on large-scale surveys at both the national and sub-national levels, such as the one reported here, are needed to bring more light to this topic and allow more accurate assessments of policy analytical activities in government, especially those governments operating within multi-level governance frameworks, to inform moves in this direction.

NOTES

1. Work on this project was carried out under a 2007-2010 SSHRC Standard Research Grant. Additional funding was received from BC Work-Study and Summer Challenge grants and from the Government of British Columbia. Research assistance was provided by Joshua Newman, Mandy Cheema, David Petroziello, Marion Gure, and Malvina Lewandowska. Invaluable assistance and input with survey techniques, pilot testing, questionnaire design, mail list preparation, and analysis was provided by Adam Wellstead, Luc Bernier, Bryan Evans, Wendy Taylor and Coralie Breen.
2. The policy advice system that supplies information to governments is, of course, very complex and includes many sources of information, from friends to spouses and close advisors (Meltsner 1990). However, alongside personal opinion and experience exists a more formal policy advice system which purports to deliver knowledge and expertise to governments. This supply network is composed of sources both within government – such as professional policy analysts employed in departments and agencies and political advisors attached to minister’s offices and central agencies – and external to government – ranging from private sector consultants to experts in think tanks, universities, political parties, and elsewhere (Boston 1994; Boston et al. 1996).

3. In many cases observers have continued to rely on only one or two quite dated works in justifying their observations and conclusions, especially the early work of Meltsner (1975 and 1976) and Durning and Osama (1994). In Meltsner's case, his observations remain astute over 30 years later, but were based on 116 interviews he conducted in the U.S. in 1970-1971 (Meltsner 1975: 14). While some data exist in these older studies, they covered only a relatively small number of countries, mainly the U.S. (Meltsner 1976; Durning and Osama 1994; Radin 2000). More recent studies on "policy supply" have looked at the U.K. (Page and Jenkins 2005), Australia (Weller and Stevens 1998); New Zealand (Boston et al. 1996); the Netherlands (Hoppe and Jeliazkova 2006), France (Rochet 2004), and Germany (Fleischer 2009), but in most jurisdictions the answers to basic questions, including how many people are in these positions or what they do, remain unknown.
4. And where they exist, these studies have tended to employ partial or unsystematic surveys (Page and Jenkins 2005), or anecdotal case studies and interview research (Hoppe and Jeliazkova 2006; Radin 2000). Comparative and synthetic studies of the supply and suppliers of policy advice are even rarer (Wagner and Wollmann 1986; Malloy 1989; Mayer, Bots and van Daalen 2004; Hawke 1993; Halligan 1995; Weible 2008; Thissen and Twaalfhoven 2001; Gregory and Lonti 2008). The existing data are so poor that in most cases it is not clear even if the job classifications and titles typically used by public service commissions to categorize professional policy analysts in government for staffing purposes are accurate or reflect a true sense of what policy analysts actually do on a day-to-day basis.
5. Very little is known about the nature of non-governmental policy analysis supplied through think tanks, political parties, and especially the growing legion of consultants who work for governments in the "invisible public service" (Speers 2007). On think tanks, business associations, political parties, and the press in Canada see Abelson 2007; Stritch 2007; Cross 2007; Murray 2007.
6. Provincial public service lists often included political appointees who had been left off public lists. However in most cases public lists and internal lists were very close in size and coverage, with about an 80% or higher overlap rate. The lists revealed a roughly proportional per-capita pattern of the size of the policy analytical community in Canadian provincial governments, with 1,800-2,000 individuals in Ontario, 400-500 in British Columbia, and about 100 in the smallest jurisdictions. The total number of policy analysts at the provincial and territorial level therefore is probably about 5,300 (3,000 in Quebec and Ontario; 1,000 in BC and Alberta; 500 in

Saskatchewan and Manitoba; 400 in the Atlantic provinces and 300 in the territories). It is expected that this number would be matched by the federal government (Wellstead having identified about 1,300 operating outside Ottawa, the remaining 4,000 being located in the National Capital Region), bringing the total number of policy analysts actually employed in Canada to around 11,000. This is roughly the same per capita ratio as reported by Boston et al. (1996) in New Zealand, where of 35,000 core civil servants in a country of 3.6 million people at the time, 1,450 person-years were devoted to the provision of advice to departments and ministries in 1993 (p. 124).

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