

THE LONG-RUN PERFORMANCE OF DECENTRALIZED AGENCIES IN QUEBEC

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Abstract

This project is part of a broad study tracking the productivity and performance of a number of government organizations in Quebec. For this specific project, we analyzed trends in the performance of Quebec government agencies created in the 1990s. These agencies are particularly interesting, in that they were created following the adoption of a management philosophy aimed at incorporating private-sector-inspired practices into the public sector. The goal of this new approach, derived in large part from “New Public Management” concepts, was to give public-sector managers more autonomy, so as to motivate them to reach established performance objectives.

Generally speaking, our research program is aimed at conducting a comparative assessment of productivity in the Quebec public sector. The first question we asked was narrower. As the first step in our research, we examined trends, including the “productivity” aspect, in the performance of government agencies that had been decentralized into agencies. There were many reasons for this choice, but the main one is that decentralizing government agencies is part of an international trend aimed at improving public sector accountability and performance. This means that if there is a group of entities in the public sector where productivity and performance should be improving, it is certainly those agencies created specifically to be as accountable as possible in every regard. In that context, we attempted to answer the following question:

“Has the reported performance of Quebec government agencies improved following the introduction of results-based management as formalized in the Public Administration Act in 2001?”

Our results show that, in general, Quebec government agencies have managed to improve their financial performance since they were created. However, for other dimensions of their performance, including output, productivity and the quality of services provided, performance indicators were flat over the period studied. Lastly, we found that some features unique to agencies, including their size and degree of autonomy and the specific nature of their mission, could have an impact on trends in their performance.

These results are original in that they provide insights into some interesting aspects of government reforms. The fact that there seems to be a link between autonomy, the specific nature of the mission and trends in different aspects of performance allows us to identify potential success factors for possible reforms. Improvements in the “revenue” aspect associated with stagnating costs and productivity lead us to believe that some agencies may have taken advantage of their monopoly situation to increase their fees. This could allow governments to set clearer indicators in their future performance contracts with different government entities.

Introduction

In this study, we examine the performance of autonomous agencies in the province of Québec following administrative decentralization and the concurrent implementation of Results-based Management (RBM).¹ Facing heavy fiscal and political pressures, during the mid 1990s, Québec's authorities followed in the wave of 'New Public Management' (NPM) and post NPM government reforms of Western economies over the last twenty some years (Borins, 2002; Mazouz, et al., 2008). Emphasizing autonomy and performance-based as opposed to process-based management of the traditional public administration, these reforms focus on service delivery and efficiency (Boukaert & Halligan, 2008; Pollitt & Talbot, 2004; Verhoest, et al., 2004). More specifically, Québec has created agencies that are under an integrated RBM program including agency performance agreements, strategic plans, performance reports and responsibility to parliamentarians along with RBM integration in civil servants performance evaluations.

Such a program is intended to facilitate management and provide public servants with the incentive and the ability to innovate and work towards performance goals, and thus potentially lead to stated objectives. However, important factors may mitigate against the success of such an effort, including the difficulty to effectively implement such a wide scale reform, the government's ability to commit to actual decentralization and impediments to managers effectively using the performance measurement system for monitoring and decision making. Other mitigating factors include difficulties in measuring performance in government as well as questions on the potential value of decentralization in this sector. Indeed, in highlighting the different dimensions and levels of accountability such as operational versus policy making, Verhoest, et al. (2004) and Lægreid, et al. (2006) raise important questions about the effectiveness of decentralization.

While the NPM literature is extremely rich and descriptive (Hood & Peters, 2004), empirical evidence of its association with reported performance is scarce (Boyne, 2003; Pollitt, 2004; Ferlie, et al., 2005). The NPM literature and the more recent study of agencification nonetheless cast doubt on the value of such reforms as a broad solution in any context. Similarly, Vining and Weimer (2005) argue that RBM is an idealistic concept and that its value has not been demonstrated. However, few studies examine 'objective' performance results --- outputs, outcomes, efficiency and quality indicators --- that the so-called reforms are supposed to improve.

The study of Québec agencies offers a rich opportunity to examine the reported performance associated with enhanced administrative autonomy and RBM. First, Québec leaders have had

¹ Administrative decentralization consists in devolving competencies to nonelected administrative bodies as opposed to political autonomy, the delegation of authority to other elected levels of government. See Verhoest, et al. 2004.

the chance to observe and to learn from other experiences, such as New Zealand's or the United Kingdom's as well as other federal and provincial reforms in Canada (Aucoin, 2002; Borins, 2002). Second, and more importantly, Québec's effort, formalized in 2001 with the adoption of '*La Loi sur l'Administration Publique*' (or LAP; see Côté, 2006), has survived many elections, including a change in the ruling party. Furthermore, it appears to be in full application and going strong seven years following the critical adoption of the LAP and thirteen years after the initial creation of agencies (Gouvernement du Québec, 2005). Such long lasting reforms are perhaps not unique but contrast with numerous other government reforms in North America that were criticized for petering out for lack of leadership (Pollitt & Bouckaert, 2000; Cooper & Ogata, 2005), for being more for show than of substance (March & Olsen, 1983) or due to the ebb and flow of political waves (Light, 1997).

We ask: 'Has the reported performance of agencies improved following the introduction of the LAP in 2001'? To do this, we analyze output, efficiency, financial and quality performance indicators from fiscal year 2002 to 2007 of 16 of the 18 agencies created over this period of time. We collected a variety of financial, workload and output data reported by agencies in their annual reports, from fiscal year (FY) 2002 or from the year of each agency's inception to its last reporting fiscal period (2007). Although our results indicate that average annual financial performance across agencies clearly improved over this period, and although agency specific costs show substantial decrease, output and productivity did not change. The few agencies that track complaints and delays report substantial improvement, while results on customer satisfaction and quality performance targets are mixed. Examination of cross agency performance across all dimensions suggests that decentralization to agencies may be more valuable in some circumstances than others and/or that some agencies may have had more latitude and made better use of RBM.

1. Québec's reform

In 1995, the Québec government created the first *Unités Autonomes de Services* (UAS), equivalent to the UK's decentralized agencies. Somewhat disorganized and loosely planned, this first attempt at decentralization yielded mixed results (VGQ, 1998). In 2001, the government pursued its effort by adopting the LAP. A much more serious and formal attempt at reforming its public sector, and specifically in decentralizing agencies to improve performance through RBM (VGQ, 1998), the law mandated agencies and departments to define a mission along with specific actions and performance metrics in a strategic annual plan to be submitted to and monitored by elected representatives (Côté, 2006). Under the law, eight UAS were transformed into formal agencies while five new agencies were created, thus decentralizing the administration of select activities such as tax collections and student loans to 'autonomous' agencies. This decentralization was intended to make operations more flexible, thus more responsive to citizen demands and more efficient (VGQ, 1998, 2004). To address the coordination and incentive problems that come with greater decentralization, the government mandated that RBM be integrated and acted upon with performance agreements between agencies and the government and through subsequent annual reports to be monitored by parliamentarians (Quenneville, 2006).

At the time of creation each agency negotiated an agreement with the government through the treasury council, including a strategic plan that it intended to implement in exchange for increased autonomy in managing financial and human resources.² While the level of autonomy granted varies across agencies, agency operations are conducted under fewer restrictions than they were under the previous regime, whether these operations were conducted in a UAS or in a department. (Aubert, et al., 2005). For example, agency managers may have negotiated increased discretion in the allocation of financial resources within their agency, including the right to carry over unused budget allocations to following years.³ Under some restrictions, agencies were also allowed to spend excess revenue for discretionary expenses. In terms of human resources, some agency managers were allowed to implement some form of incentive-based compensation and were no longer subject to government restrictions for their hiring process.

In the following section, we discuss reasons why decentralization with RBM could lead to the intended improvements in service delivery and efficiency in the province of Québec and reasons why they may not. We then briefly review other studies on government reforms and then proceed with a description of methodology and data, followed by the analysis and discussion of results.

² These contracts are renegotiated annually.

³ Budgetary envelopes that were normally fixed annually (i.e., expired at the end of the fiscal year) were opened to allow funds to be carried over to subsequent periods.

2. Theoretical and empirical background

Economic theory does not provide a clear prediction on the association of performance with decentralization and the RBM implemented in Quebec agencies. On the one hand, agency and public choice theorists could argue that narrowing the task domain of managers through agencies and enhancing their accountability will reduce information asymmetry. However, decentralization may not be warranted. Furthermore, there are other limitations particular to the public sector: measurement of results, learning to manage performance as well as constraints on the use of incentives. Nonetheless, the empirical evidence is mixed, with some studies showing promise for decentralization when it is warranted or aligned with an effective RBM that is used in decision making and to allocate resources and rewards. We next discuss some of these issues and why we may expect the reform to have to improve on service delivery and efficiency.

1.1 The pros and cons of decentralization in government

While Bilodeau, et al. (2007) observe that corporatization in Canadian governmental agencies is associated with an increase in performance on most metrics examined, and in spite of the agencification trend (Verhoest, et al., 2004), it is not clear that decentralization of activities is necessarily appropriate throughout the public sector. Managerialists argue that enlarging managerial autonomy enables public organizations to innovate. More dynamic and innovative public organizations may better be able to perform on key dimensions such as productivity and the quality and relevance of service to users (Verhoest, et al., 2007). Thus, delegation of authorities to lower levels should be particularly valuable in highly specialized and competitive environments as the healthcare or high-tech industries where local specific knowledge is more valuable and outweighs the monitoring costs entailed by decentralization (Brickley, et al., 1995).⁴

Centralization and process control has long been the model adopted by government. Centralized management implies less management discretion and thus facilitates monitoring, reduces the risk that unsanctioned actions are taken and provides economies of scale (Pollitt, 2005). While decentralization calls for incentive rewards, these are not well perceived in the public sector and government regulation often severely constrains the ability to use them. As a result, managerial autonomy may be more difficult to monitor in the public sector and leave more opportunity for rent seeking (Vining & Weimer, 2005; Tullock, 1965). Furthermore, without the discipline of

⁴Tullock (1965) also hinted to limits of centralization in this environment, pointing out that the information asymmetries in large-scale bureaucracies are such that they will be error prone and may be too cumbersome to adapt to rapidly changing conditions.

product competition, decentralization may foster corruption associated with the monopoly powers of decentralized agencies that operate like small businesses (Meier & Hill, 2005).⁵

1.2 The pros and cons of RBM

Whether or not it is deemed appropriate, autonomy increases the need for accountability and incentive mechanisms to motivate and guide managers towards organizational objectives (Dixit, 2002; Pollitt, 2005; Bilodeau, et al., 2007). Indeed, weak accountability, lack of strategic direction and poor monitoring of results have often been invoked as the cause of various financial crises leading to 1980s reforms in government (Hood, 1991; Savoie, 1995). RBM is implemented to solve this problem. It provides the information structure, through planning and feedback on relevant performance metrics (Pollitt, 1986; Hood, 1991; Barzelay, 2001; Aucoin, 2002). This structure should help various constituents, including parliamentarians and government managers, to assess the cost, the output and ultimately the outcome of actions taken by members of various government entities. Monitoring outputs and outcomes rather than processes is supposedly designed to hold public sector managers accountable for the results of their actions, correcting one of the major weaknesses of 'old style' bureaucratic public management (Hood, 1991). As Boukaert and Halligan (2008) and Van Dooren and Van de Walle (2008)'s detailed reviews reveal, such monitoring is not so new and the effectiveness of this approach in government is coming into question, as governments that report outcomes and output cannot seem to make effective use of it in resource allocation.

The effectiveness of RBM though depends on a number of factors including civil servants' ability to influence performance on chosen metrics through their actions. Indeed, as Pearce and Perry's (1983) study of merit pay in the Federal government and Wildavsky's (1984) account of Management by Objectives suggest, the effectiveness of RBM on civil servants' motivation and their ability to act will depend on the former as well as on the government's commitment to actually incorporate the RBM metrics in performance evaluations, promotions and pay decisions, as well as resource allocation decisions. Government reforms may be implemented 'for show' and lack the commitment to full integration within the organization (Lægreid, et al., 2006; March & Olsen, 1983). Indeed, other studies have shown that reforms implemented with a lack of accountability measures, or with no clearly demonstrated usefulness of measures, are not acted upon effectively by civil servants (e.g., Chenhall & Euske, 2007; Cavalluzzo & Ittner, 2004; Geiger & Ittner, 1996). Finally, and just as important, is the choice of metrics; the degree of congruence between performance metrics and strategic objectives will determine the extent to which good performance on chosen metrics translates into value for the citizens, i.e., increases service quality and improves efficiency in delivery (Kaplan, 2001). Public sector

⁵ Verhoest (2005) and Van Thiel (2001) observe a positive association between competition and performance. Cavalluzzo, et al. (1998) also documents the effect of competition on increased efficiency in government.

entities face particular measurement constraints due to specialized services or lack of competition for their services.

Power (2005) argues that performance measurement may become an end in itself. When reforms come as a result of a crisis (such as in the UK), reformers may put too much emphasis on accountability, creating an ‘audit explosion’. As a result, the growth of auditing can lead to a decline in organizational trust as it creates an excessive preoccupation with representations of performance and the associated games that are played at the expense of public service quality. Indeed: ‘... if accountability is pursued too harshly, public managers may therefore learn the wrong thing, they learn to avoid risk taking, to pass the buck and to shield themselves against potential mistakes and criticism’ (Behn, 2003, p. 11). Finally, given the lack of experience with a performance measurement driven system, even motivated managers may have to go through a learning curve to identify informative and available measures and how to utilize them effectively.

The preceding discussion underscores the difficulty in assessing the performance of government organizations which have multiple goals and constituents and the difficulty in motivating and coordinating effort towards desired outcomes (Moe, 1984; Shapiro, 2005). In their study, Heckman, et al. (1997) report that ‘the short-run performance measures that are used ... are either uncorrelated with or negatively correlated with net value added, especially in the long run’ and that civil servants game the performance standards to maximize their center’s performance. Indeed, as they state, it may be ‘unreasonable to expect that externally imposed performance standards can solve the problems of governance and direct activity toward socially productive goals in bureaucracies that serve many masters with conflicting or ill-defined goals’.

Recent research does nonetheless suggest that increased operational autonomy along with RBM can lead to concrete, value-added performance improvement, when supported by strong commitment by governing bodies and integrated in decision making (Verhoest, et al., 2004; Verhoest, 2005 and Verhoest, et al., 2007). For example, Thibodeau, et al. (2007) examined the Veterans Health Administration’s decentralization of operations with an integrated RBM-type performance structure through performance contracts and reporting aligned with strategic objectives. Their results suggest that such a program can lead to economically significant cost per patient reductions with improvements in service quality and access, though not without some gaming of performance measurement. The Veterans hospital system early experience suggests that, with continued commitment, decentralization with concurrent performance incentives is possible in a large organization facing private sector competition, operating in a highly specialized and evolving environment where local knowledge may be particularly valuable and where market competition provides discipline (Thibodeau, et al., 2007). Nonetheless, as follow-up research on the VHA reveals, government commitment to effective wide-ranging decentralization is difficult, and part of that may be due to the highly political nature of

government operations, to the high scrutiny of certain government operations and to the responsibility that managers ultimately bear for their actions.

1.3 Québec's reform versus the pros and cons of decentralization and RBM

Our initial assessment of Québec's reform suggests that the government's commitment was strong enough to have an impact on the performance of decentralized agencies. The strategic plan adopted by each agency suggests that the degree of autonomy allowed to decentralized agencies is strong. However, it appears to vary across agencies, with some agency leaders complaining, for example, of lack of flexibility in hiring procedures. Nonetheless, agencies are allowed some discretion in spending certain categories of unused funds (Gouvernement du Québec, 1999).

A notable feature of Québec's LAP is that agency managers and department deputy ministers are accountable directly to parliament through performance agreements. Furthermore, the level of monitoring and follow-up on performance reports by the parliamentarians initially suggests that accountability is taken seriously by the government. Accounts of parliamentary discussions and auditor reports suggest that parliamentarians and the auditor general are paying more than lip service to the performance documents; deputy ministers and agency managers have to answer very detailed questions on performance targets and results from parliamentarians who, with the help of the auditor general's office, seem to scrutinize the performance agreements and subsequent performance reports (E.g., see CPAP, 2001). While these discussions may be just a show by the parliamentarians, such accountability is an important shift in behavior and suggests that RBM is being used for control and decisions.

As for incentives, Québec's reform specifically mandates that agency performance metrics be incorporated in employee performance evaluations. Also, the auditor general's office certifies that agencies adhere to this mandate in its value for money audits. Another source of incentives comes from added revenue that agencies may collect and keep or from less stringent budget constraints. Finally, perhaps recognizing the importance of measurability in RBM, the Québec government apparently targeted the decentralization to government operations directly involved with citizens and that are measurable (VGQ, 1998).⁶ Such commitment to decentralization, accountability and incentives, at least on the surface, suggests that the Québec government is determined to improve the efficiency and quality of service delivery.

If flexibility and monitoring are indeed integrated and functioning as described and decentralization is warranted for those agencies, we may observe systematic improvements in performance across the agencies. However, if, as other studies of government reforms have

⁶ However, a number of agency activities do not seem to meet these criteria (see Appendix 1).

observed, reforms are ‘for show’ rather than effectively implemented, then, all else being equal, we may not observe improvements.⁷

We analyze performance on four dimensions of service delivery: output, productivity, financial and quality. We document the evolution of a large set of performance indicators over time, from 2001 up to the latest year of reporting. We use the 2001 LAP as the critical event date as the LAP legislation formally introduced the agencies and mandated the RBM-based accountability framework under which they would operate. Therefore, starting on that year, the results reported by the agencies are generated under a formally reformed administrative framework.

We next describe more specifically our data, sample agencies and methodology followed by results and conclusion.

⁷ Such a finding would be consistent with sociological institutional factors of isomorphism and window-dressing as potential motivations for the reform (DiMaggio & Powell, 1983).

3. Methodology

Data collection proceeded in three steps:

- (1) Sample identification,
- (2) Data extraction, and
- (3) Long-term performance scorecard.

1. Sample:

First, we identified all the agencies for which we could obtain a stream of at least four annual reports, starting with fiscal year (FY) ending March 31, 2002, and proceeded to obtain these reports. Appendix 1 provides a detailed description of the agencies in our sample. Table 1 shows the year of creation, total FTEs (Full-Time Employee Equivalents), annual budget, and primary output by agency.

1_ Summary agency information

Agency	Year of creation	Total FTEs (end of period)	Annual budget (thousands)	Primary output measure
AFE	1997	344	19,500	Student applications
BIA	2001	141	9,394	Penal offences processed
CARRA	1995	441	40,400	Beneficiaries
CCQ	1995	30	2,183	Hours of restoration
CEAEQ	1997	107	10,446	Billable hours
CEH	2001	175	12,761	N/A
CGER	1997	410	53,482	Vehicles rented
CPF	1995	1,079	80,500	Amounts collected
CR	2001	238	12,700	Amounts collected
CSQ	2001	30	4,567	Road signs installed
EQ	1998	4,484	292,700	New employment cases
LSJML	1996	137	9,723	Forensic reports
RC	2001	43	5,365	Reports
RRQ	1997	1,121	144,900	Beneficiaries
SAG	1995	162	57,773	Flight hours
SR	2001	5,671	151,464	Files processed

2. Data extraction:

We then extracted performance data from each agency's annual performance report, from fiscal 2001 up until the last report available (FY 2006 or FY 2007). We first categorized the measures into the following four categories: output, productivity, financial, and quality. We then reclassified these data into two main categories which we use for our analysis: (1) *neutral indicators* and (2) *agency specific indicators*. *Neutral indicators* are reported by each agency.

Agency specific indicators typically vary across agencies as they are tailored to each agency's *mission* and are part of the annual performance contract that each agency negotiates with the government. We next describe each of the four categories followed by a description of how we constructed the metrics.

1. Output

Increasing responsiveness to citizens is one of the key objectives behind the creation of autonomous agencies. Agencies are expected to make services available to a wider array of citizens, including those with limited access due to regional or other constraints, to improve service delivery and to alter their menu of services in response to consumer demand where necessary.⁸ The RBM process implemented in the reform supports this effort by focusing attention on service delivery rather than processes and by providing feedback on performance. However, the lack of competition for most of the services offered by agencies may constrain the effectiveness of this process. Improvements in service delivery may be observed through increases in the volume and in the variety of services provided by each agency as well as in the quality of service. For our performance scorecard we focus on volume and quality (discussed below). We use *output* in reference to the volume of each of the services provided by an agency. There is one output measure for each service. We identify the output of the service that is most directly linked to the agencies' mission for the set of neutral indicators (see Table 1, Primary output measure). The remaining output measures are included in the agency specific indicators.

2. Productivity

Improving productivity, that is, increasing the amount of services delivered, while using the least amount of resources, is another important goal of this reform enforced through the annual performance contracts. As discussed in section 2, decision authority varies across agencies. Some agencies may be more limited than others in their ability to manage labor, their primary resource, and thus may not be able to influence productivity significantly. To the extent that agency managers have effective decision authority over labor and that there is room for improvement, all else being equal, we should observe an increase in productivity across agencies following the LAP.

In the set of neutral indicators, we measure an agency's productivity as the ratio of primary output volume to an agency's number of full-time employee equivalents (FTEs). Some agencies also track and report their own measure of productivity. We include performance on these agency specific measures of productivity in the set of agency specific indicators.

⁸ Customers are citizens or other government entities.

3. Financial:

Government entities, by definition, do not exist to make a profit but to provide services. Studies of financial performance in government thus typically look at expenditures (Boyne, 2003). However, the creation of agencies targeted government services that could be specifically isolated and that, very often, were performed in exchange for some form of revenue (e.g., collection agencies, aerial services).⁹ Hence, it makes sense to examine the change in revenues and in revenues versus costs following agency creation. Total revenue, cost savings, the ratio of revenues to operating costs or the difference between revenues and operating costs may be key performance metrics under RBM, particularly for the agencies that are allowed to keep revenue surpluses (Bilodeau, et al., 2007).

We examine total revenues generated, the ratio of revenues to operating costs along with the average cost per primary output in the set of neutral indicators. Some agencies also report performance on other financial indicators related to revenue or budget surplus and cost savings. We aggregate and analyze the latter under agency specific indicators.

4. Quality:

Many critics of RBM argue that too much emphasis on financial indicators can lead to the deterioration of the quality of the services. However, improving service delivery is a central object of Québec's initiative. Agencies thus have incorporated a variety of process and output or outcome quality metrics to guide and to motivate their employees. These metrics vary across agencies. However, a number of agencies track some measure of customer satisfaction, number of complaints, wait times and/or response time and have preset targets on these measures (e.g. number of times services are provided within a certain amount of time). We thus extracted and analyze performance on these four dimensions of quality under agency specific metrics, i.e.:

- (1) Meeting a specific target,
- (2) Customer satisfaction,
- (3) Delivery time or delays, and
- (4) Number of customer complaints.

⁹ All but three agencies considered in this study generate revenues that are a function of their output. In contrast to many other governmental organizations in Québec, agencies use a form of accrual accounting to report revenues and costs in the annual report.

3. Long-term performance scorecard

We used standardized values of each indicator to aggregate and compare results across agencies and over time, following a standard methodology (Bilodeau, et al., 2007). For each agency, we built two long-term performance scorecards of annual standardized performance:

- (1) Neutral indicators, and
- (2) Agency specific indicators.

We then calculated the annual change in the value of the index and the annual change over the period for each indicator in each agency. For agency specific indicators, we first calculated the average value of the index across multiple indicators in one category for each year.

4. Results

Cross-sectional performance

We present two tables summarizing the performance of agencies from FY 2002 to FY 2006 or 2007 and examine the within agency performance over time, across the sets of neutral (Table 2) and agency specific (Table 3) indicators. We then examine more closely differences in performance across agencies (Table 4) and characteristics of those agencies.

Neutral indicators

Table 2 shows the end of period value of the performance index for each agency for each neutral indicator. Visual inspection, confirmed by statistical tests, reveals that, on average, agencies did not significantly improve in terms of output or productivity or on reductions in average unit cost. However, the financial performance shows economically and statistically significant improvements across all agencies. The average end values in revenues and in revenues over costs across agencies are 1.281 and 1.173 respectively (significantly different from 1, 95% confidence interval, Wilcoxon Signed Rank Test). The bottom line of Table 2 reveals that the average annual increase on these two dimensions was 5.1% and 3.4%, respectively.¹⁰

Interestingly, the results reveal that although average output increased only by 0.7%, average revenue increased by 28.1% over the period of 2002 to 2007. This can happen if, for instance, agencies decided to charge higher tariffs for their services, a scenario that becomes even more conceivable given that most agencies are in a monopolistic position. These aggregate results do not reveal a systematic improvement in efficiency, output or productivity, as purportedly aimed by the reform. They are consistent with agencies managing a financial crisis.

¹⁰ Similarly, unreported analyses of cross agency annual performance reveal an index standard value for revenues and revenues to cost ratio that is significantly different from 1 for most years covered in this study (based on Wilcoxon Signed Rank Tests), suggesting that agencies were able to generate more revenue and surplus in most years.

2_ Neutral indicators - End value (2007) of index by agency

Agency	Primary output (+)	Productivity (+)	Financial		
			Total revenue (+)	Revenue / Cost (+)	Average unit cost (-)
AFE	1.077	1.045	--	--	1.045
BIA	0.656	0.546	0.793	0.807	1.498
CARRA	1.303	1.182	1.254	1.032	0.932
CCQ	1.021	1.059	0.955	1.110	0.843
CEAEQ	0.930	1.002	0.954	1.062	0.966
CEH	--	--	2.284	1.480	--
CGER	1.100	0.944	1.280	0.996	1.163
CPF (2006)	0.931	0.798	1.384	1.314	1.132
CR	0.952	1.268	--	--	0.836
CSQ	0.434	0.448	1.211	1.017	2.743
EQ	0.980	0.702	--	--	0.961
LSJML	1.358	1.218	2.488	2.336	0.785
RC	1.703	2.020	1.585	1.288	0.723
RRQ	1.160	1.056	--	--	1.015
SAG	1.039	1.122	0.874	0.996	0.845
SR (2006)	1.093	0.594	--	--	0.872
Geometric mean	1.007	0.936	1.281**	1.173**	1.026
Proportion in the expected direction	9/15 60%	9/15 60%	7/11 64%	8/11 73%	9/15 60%
Average annual change	0.14%	-0.29%	5.13%	3.35%	0.75%

This table presents standardized performance results for each agency on each of the five performance dimensions in the neutral indicators. Performance is calculated as the ratio of the value of the measure at the end of the period divided by the ratio of the measure in the base year, FY 2002. ** indicates that the mean is different from 1 (95% confidence level, Wilcoxon Signed Rank Test).

Table 3 shows the value of the indexes at the end of the period by agency and across years for the agency specific indicators. When an agency reports more than one indicator in a category, we aggregate the agency's indicators in that category for each year and then compute the average across years for the agency.

3_Agency specific indicators - End value (2007) of index by agency

Agency	Productivity (+)	Financial		Quality			
		(Surplus) (+)	(Cost) (-)	Meeting target (+)	Customer satisfaction (+)	Delays (-)	Complaints (-)
AFE	--	1.045	--	--	0.888	0.323	--
BIA	0.632	1.116	0.573	--	--	--	--
CARRA	--	--	1.233	1.195	--	0.822	--
CCQ	1.065	--	0.805	--	1.031	--	--
CEAEQ	1.250	1.028	0.942	--	--	--	--
CGER	0.990	1.161	0.893	0.757	--	--	--
CPF(2006)	1.026	--	0.952	1.050	--	0.299	--
CR	1.076	--	0.518	1.400	--	--	0.578
RC	--	--	--	1.023	--	--	--
RRQ	--	1.440	--	0.999	--	--	0.500
SAG	--	--	--	0.961	--	--	--
SR (2006)	--	0.949	--	--	--	0.894	--
Geometric mean	0.986	1.113	0.814	1.039	0.957	0.516 [*]	0.538
Proportion improved	4/6 67%	5/6 83%	6/7 86%	4/7 57%	1/2 50%	4/4 100%	2/2 100%
Average annual change	0.31%	3.34%	0.34%	0.81%	0.02%	7.69%	-9.20%

This table presents standardized performance for each agency on the agency-specific indicators. Performance is calculated as the ratio of the value of the measure at the end of the period, divided by the ratio of the measure in the base year FY 2002. * indicates that the mean is different from 1 (90% confidence level, Wilcoxon Signed Rank Test).

Agency specific indicators

While only six agencies report measures during the whole period, the results for agency specific productivity indicators are consistent with those on primary output (Table 2). Two out of three agencies have improved while the growth rate (geometric mean) is below 1, revealing lack of overall improvement and high variability. The results on agency specific financial surplus are also consistent with those on neutral indicators on revenues. Of the six agencies reporting, 83% are increasing, with the average result being slightly less than the average increase in revenues in Table 2.

However, agency specific cost indicators show an average reduction of 18.6%, much higher than the 2.6% average increase in unit cost from Table 2. Each agency reports better results on the agency specific indicators. This difference may reflect an inappropriate selection of cost measures on our part and/or errors or differences in methodology or calculation. They may also reflect real improvement on selected performance drivers of cost measures by each agency. Another potential explanation that we cannot discard without further investigation is that agencies game the system by choosing to report mostly those cost indicators that they know are improving.

While we only have data on quality indicators from a few agencies for the full time period, the results are interesting. First, a thin majority of agencies report improvements in meeting their quality targets. While this result is highly dependent on how attainable the target is, this indicator at least reveals that eight agencies have tracked and managed quality targets over our reported period. Only two agencies tracked customer satisfaction during the length of the period, with AFE reporting an 11% decline and CCQ remaining relatively stable (3% increase). Finally, although few of them do so, all of the agencies that measure delays or complaints show substantial improvements with an average decline of almost 50%. Although these results do not allow us to formally conclude about quality, they suggest that observed systematic revenue increases and cost reductions across agencies during our period of study were likely not reached at the expense of quality. For the most part, the management of quality indicators, though limited, is yielding positive outcomes.

In sum we observe that, all else being equal, on average, agencies have not increased output or productivity but were able to generate increases in revenue and generate surplus. Also, while agency specific measures are even more indicative, on average agencies were able to achieve cost savings in their operations. Agencies that report on delays or complaints have significantly improved on those dimensions. However, there are some agencies that appear to be doing relatively well on all the dimensions during our period of study while others are not. In the following section, we examine cross agency variability in performance and potential explanations.

Agency specific performance

To examine differences in agency specific performance across all dimensions, we adopt a heuristic approach that consists in comparing agencies in order to identify the characteristics of better performing agencies and those of agencies that lag. We first rank agencies in quartiles using their relative performance on each of the indicators for which we have results for at least eight reporting agencies. These results are shown in Table 4. Then, we attempt to identify the characteristics of agencies that belong to four different groupings established using average quartile rankings.

4_ Quartile ranking of the agencies across six selected performance indicators

Rank	Agency	Output	Productivity	Revenues	Revenues / costs	Average unit cost	Financial (cost)	Average quartile ranking
1	LSJML	1	1	1	1	1		1.00
	CR	3	1			1	1	1.50
	RC	1	1	1	2	1	4	1.67
2	RRQ	1	2			3		2.00
	CARRA	1	1	2	3	2	4	2.17
	CCQ	3	2	3	2	1	2	2.17
3	AFE	2	2			3		2.33
	CPF	3	3	2	1	3	3	2.50
	SAG	2	2	3	4	2		2.60
	CGER	2	3	2	3	4	2	2.67
	EQ	3	3			2		2.67
	SR	2	4			2		2.67
4	CEAEQ	4	3	3	2	3	3	3.00
	BIA	4	4	4	4	4	1	3.50
	CSQ	4	4	4	3	4		3.80

This table presents the quartile ranking of each agency on five neutral indicators and one agency specific indicator (financial (cost)). We selected all the neutral and agency specific indicators for which had data from at least eight agencies. For each indicator, we attributed the quartile rank 1 to the 25% highest performers, quartile rank 2 to the next 25% and so on. We then ranked agencies in descending order on each indicator. The last column shows the agency's average quartile ranking across the measures for which we have data on that agency. We dropped CEH because of missing data.

The quartile ranking reveals that LSJML, RC and CR performed better than their peers across almost all dimensions for which we have a performance indicator. Their average quartile ranking varies from 1 to 1.67. In a second group, we find RRQ, CARRA and CCQ. The quartile ranking of this second grouping varies from 2 to 2.2 approximately. The third group, with average quartile ranking varying from 2.33 to and 2.67, include six agencies among which we find the largest (EQ and SR). Finally, the last group of agencies, CEAEQ, BIA and CSQ, have average quartile ranking above 3.11

Group 1, the top performers, is comprised of small agencies (less than 250 FTEEs) with a very clear mission statement and with primary tasks oriented towards providing services. (Lægheid, et al., 2008). These agencies have autonomous revenues that increase as a direct function of their output. In short, these agencies are in a situation where they can basically operate like small private ventures.

¹¹ Because it reports only two performance indicators, CEH was excluded from this analysis.

The second group is comprised again of agencies with a clear mission statement and nonconflicting objectives. The CCQ is quite similar to the agencies found in the first group, in terms of size, autonomy and mission. While RRQ and CARRA are much larger, they both have very specific missions related to portfolio management, and thus key performance indicators will be financial. Furthermore, their autonomy is constrained as the agency must follow a conservative portfolio management strategy to ensure the safeguard of assets under management that belong to Quebec citizens. These agencies also have the distinction of being the oldest, dating back to 1995, and so likely have more experience in performance management.

The third group includes large agencies such as EQ, SR and CPF, each with more than one thousand FTEs. A closer look at this group reveals agencies such as AFE, EQ and SR with mission statements that are unstable over time. For example, in a recent survey of performance indicators used by decentralized agencies in Québec, Bégin-Lafontaine (2008) found that due to the confusion related to their mission statements, AFE and EQ have changed their strategic plan and altered their set of performance indicators almost every year since their creation. Given their social role, agencies such as AFE, EQ and SR, that all deal with financial aid of some sort, are also more prone to political intervention. The remaining agencies in the third group do not necessarily have an unstable strategy over time, but could be classified as having a low level of autonomy. CPF is large and is endowed with strict operational procedures. Smaller in size, SAG and CGER are basically serving other governmental organizations and, as such, do not have a clear autonomous revenue source or incentives from external customers.

Finally, among the poor performers, we find agencies that experienced severe problems during the period of study. Most of CSQ's poor performance results are driven by a severe drop in output that occurred in the first post-LAP year. Although output production is stable from year 2 to 5, indexed cumulative results remain negative at the end of the period covered in this study.¹² As for BIA, results are fairly stable until FY 2006, when it was hit by an employee strike. The agency has not been able to recover during the two remaining years covered in this study. Among all the agencies in our sample, CEAQ has the most expanded mission statement.¹³ Only a small portion of its revenue comes from autonomous sources. As the proportion of autonomous revenues decrease over time, the agency basically relies on government financing to survive.

We attempted to identify ex-post, discriminating agency characteristics based on a qualitative and informal approach. It appears that small service providing agencies with a clear mission statement that is stable over time with managerial autonomy perform better than their peers. These results echo those of Lægneid, et al. (2008) who report that size, the level of autonomy

¹² The CSQ was fully privatized in April 2009.

¹³ The mission statement covers close to one full page, compared to a few lines for most other agencies.

and the nature of the primary tasks matter for performance evaluation. They suggest that it may not suffice to put the agency label on a given organization to experience increased performance. Concepts like autonomy and mission stability are undoubtedly hard to measure and further analysis is needed to further ascertain these conjectures.

5. Conclusion

This study examined the association of performance of agencies subjected to an RBM program following the LAP across multiple dimensions from FY 2002 to 2008. Limitations include the absence of data prior to the reform or of data to capture external macroeconomic factors. We also do not attempt to predict the performance that could have been without the decentralization. Nonetheless, this preliminary but detailed examination of reported performance across such a large number of agencies and over such a long period time provides some interesting insights and paths for further investigation.

Our cross-sectional analysis suggests that agencies may have focused more on revenue and cost areas than on productivity or quality. On average, agencies report substantial and statistically significant increases in revenue and revenue over cost indicators. However, average reported performance on output, productivity and cost (neutral indicators) is relatively stable during this period. This suggests that agencies would have increased revenues through an increase in fees, an approach which is not the pure intent of new public management. We do observe quite substantial cost reductions for agency specific indicators, a result that prompts further investigation. Overall, these results are not surprising considering that financial crisis is one of the drivers behind Quebec's reform. Results for quality, though limited, suggest at least that increases in revenue were not at the expense of quality and if anything, those that have been tracking delays and complaints have substantially reduced them.

The absence of improvement in the ratio of primary output to FTEs may also suggest that many agencies were very productive prior to the reform. Alternatively, it may be that, in spite of appearances, agencies have little 'effective' control over human resources and thus are not able to reduce manpower. Finding no systematic increase in output and productivity throughout this period may merely reflect market demand and the possibility that those agencies were highly productive prior to the reform. The data used in this study does not allow us to discriminate between these possibilities; however, further investigation is warranted.

Consistent with findings by Lægreid, et al. (2008) in their analysis of a similar program in Norway, there may also be a learning factor. Agencies that report financial measures often were reporting and managing these measures prior to the LAP as those were key metrics. Managers are used to managing these aspects of operations and understand the actions that need to be taken. Furthermore, a financial crisis would have prompted agencies and parliamentarians to focus on financial metrics. The focus on productivity and quality is a relatively newer phenomenon; many agencies are still learning to manage them and to identify the performance drivers of service quality.

Analysis of agency specific performance reveals that agencies operating in conditions similar to those of small private ventures --- a clear and nonconflicting mission statement coupled with

greater autonomy --- perform better than larger, more constrained agencies pursuing a large number of potentially conflicting objectives. These results suggest that some agencies are better at managing than others, may be better suited for decentralization, or may have been attributed more latitude.

Appendix 1

Description of the agencies

We collected data on the following 16 agencies listed with a short description of their mission.

1. Aide financière aux études (**AFE**): Manages student financial aid programs.
2. Bureau des infractions et amendes (**BIA**): Ensures the follow-up of citations and the collection of overdue fines and legal costs imposed by a judgment.
3. Commission administrative des régimes de retraite et d'assurances (**CARRA**): Administers pension plans for the Québec government and provides related expertise.
4. Centre de conservation du Québec (**CCQ**): Provides professional restoration services and expertise to museums and other institutions engaged in conservation.
5. Centre d'expertise en analyse environnementale du Québec (**CEAEQ**): Provides a wide array of environmental analyses to support the availability, quality and continuity of expertise for environmental protection and resource conservation.
6. Centre d'expertise hydrique du Québec (**CEH**): Manages the provincial water network ensuring the safety, equity and sustainable development of water supplies.
7. Centre de gestion de l'équipement roulant (**CGER**): Operates and maintains the vehicle and motorized equipment fleet owned by the Québec government.
8. Centre de perception fiscale (**CPF**): Recovers fiscal and other debts owed to Revenue Québec.
9. Centre de recouvrement (**CR**) : Collects amounts owed to the Health and Social Services Ministry (Ministère de la Santé et de la Solidarité Sociale).
10. Centre de signalisation (**CSQ**): Manages road signalization throughout the province.
11. Emploi-Québec (**EQ**): Provides employment related services to individuals and organizations to develop the workforce and reduce unemployment in Québec.
12. Laboratoire de sciences judiciaires et de médecine légale (**LSJML**): Provides forensic expertise in support of police or legal investigations. Certifies the integrity of casinos and video lottery terminals.
13. Régie du cinéma (**RC**): Manages the motion picture rating system and related distribution fees within the province. Also classifies and approves films for distribution in movie theaters and home video outlets.
14. Régie des rentes du Québec (**RRQ**): Administers the Québec Pension Plan and the Family Benefits Program and offers counseling on other compensation and benefits.
15. Service aérien gouvernemental (**SAG**): Manages and operates government owned aircrafts.
16. Sécurité du revenu (**SR**): Manages financial aid to individuals and families.

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