Strategic Planning and Implementation Success in Public Service Organizations: Evidence from Canada

<table>
<thead>
<tr>
<th>Journal:</th>
<th>Public Management Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuscript ID:</td>
<td>RPXM-2014-0262.R2</td>
</tr>
<tr>
<td>Manuscript Type:</td>
<td>Article</td>
</tr>
<tr>
<td>Keywords:</td>
<td>Formal strategic planning, Strategy implementation success, Involvement, Stakeholder uncertainty, Canada</td>
</tr>
</tbody>
</table>
Strategic Planning and Implementation Success in Public Service Organizations: Evidence from Canada

In this paper, we examine the role that formal strategic planning plays in determining the success of strategy implementation in a set of more than 150 public service organizations from Canada. We also analyze the mediating effects of managerial involvement in strategic planning and the moderating effects of stakeholder uncertainty on the planning-implementation relationship. A structured online questionnaire was used to collect data. Our findings suggest that formal strategic planning has a strong positive relationship with implementation, which, though mediated by managerial involvement, becomes even more salient in the face of stakeholder uncertainty. Several implications of these findings are discussed.

Key words: Strategic planning; strategy implementation; implementation success; managerial involvement; public service organizations: Canada
Introduction

Strategy implementation is “the realization of strategy and what the firm does” (Håkonsson et al., 2012: 182). The successful implementation of strategic decisions is widely thought to be critical to the achievement of organizational aims and objectives (Elbanna, Thanos and Colak, 2014; Schweiger and Sandberg, 1991). This applies as much to public sector organizations as to those in the private sector. Only when the plans of the top management team are executed properly and in full, it is possible to attribute organizational outcomes to the decisions made by management and to feel some confidence that public organizations are masters of their own destiny (Elbanna and Child, 2007); at least within the limits posed by the democratically mandated “authorizing environment” in which they operate (Moore, 1995). Nevertheless, despite widespread recognition of the critical role that strategy implementation success plays in determining organizational achievements amongst public management theorists (Bryson, 2010; Poister, 2010), there remain few studies that actually examine the antecedents of successful strategy implementation in public service organizations (for reviews of the state of art see Bryson, Berry and Yang, 2010; Poister, Pitts and Hamilton, 2010). In fact, the literature on strategy implementation generally remains fragmented and dispersed throughout the general and specialized management literatures, with little systematic investigation of any of the major themes relating to implementation success (Bossidy and Charan, 2011; Elbanna, Thanos and Colak, 2014; Noble, 1999). In this paper, we seek to cast light on a critical issue running through scholarly debates about strategic management in the public sector and the implementation of key decisions: the role that formal strategic planning can play in determining strategy implementation success.
Strategic planning is a set of concepts, procedures and tools that organizations use when determining their overall strategic direction and the resources required to achieve strategic objectives (Bryson, 2011). Although aspects of strategic planning are common to all types of organizations, the application of planning processes needs to be carefully tailored to the public sector environment when applied by public service organizations (Bryson, 2011). In particular, public managers have to build-in the perspectives and needs of those stakeholders with whom they must co-operate and collaborate in order to achieve organizational goals (Bryson, Crosby and Bryson, 2009). Not only is the formal strategic planning undertaken by public service organizations an important indicator of top management’s commitment to developing and implementing coherent and comprehensive organizational strategies (Boyne, 2010), it is also a key means for promoting inclusive public management in a democratic society (Bryson et al, 2009). The more time and effort that is devoted to analyzing the internal and external environment, and developing and evaluating strategic options, the more managers may feel confident that the outcome of that process will be a positive one (Camillus, 1975; Capon, Farley and Hulbert, 1987). As such, the basic assumption underpinning the practice of strategic planning is that it is rational to invest resources in formulating good plans because this will vastly improve the prospects of implementation success (Mintzberg, 2000).

Despite the popularity of the idea that planning matters for implementation, there have been few empirical studies of the connection between planning and implementation in public service organizations using primary and secondary data on those organizations (Bryson, Berry and Yang, 2010; Poister, Pitts and Hamilton, 2010). Moreover, little attention has been devoted to the boundary conditions of the relationship between formal strategic planning and strategy implementation success. In particular, the active participation of managers in the strategic
planning process is typically regarded as essential for making strategic decisions work (Elbanna, Thanos and Colak, 2014; Floyd and Wooldridge, 1994), and as such managerial involvement in planning is likely to mediate the connection between strategy formulation and strategy implementation success (Collier, Fishwick and Floyd, 2004; Floyd and Wooldridge, 1997).

At the same time, formal strategic planning could potentially enable public service organizations to better manage the support from stakeholders that is needed to achieve strategic objectives (Pfeffer and Salancik, 1978). This is especially important in the public sector, since the context in which public organizations operate has a massive influence on organizational behaviour and outcomes (see O’Toole and Meier, 2015). In particular, the ways in which public organizations respond to stakeholders has become increasingly important as those organizations have needed to do more to collaborate and co-operate with the diverse actors who have a stake in the process of strategy implementation (and formulation) (Osborne, 2006).

Does formal strategic planning improve the implementation of strategic plans in public service organizations? Might the connection between planning and implementing strategies be attributable to the active involvement of managers? Does strategic planning have an even bigger implementation pay-off under conditions of stakeholder uncertainty? To answer these questions, we examine the relationship between strategic planning and strategy implementation success, the mediating role of managerial involvement and the moderating role of stakeholder uncertainty using data drawn from a survey of senior public sector managers in Canada.

During the past two decades, strategic planning in Canadian governments has gained importance in response to increasing public demands for accountability and transparency. For example, since the late 1990s, the federal government has required government departments and agencies to produce annual Reports on Plans and Priorities (RPP) (Pollitt and Bouckaert, 2004).
The RPPs, which detail departmental priorities by strategic outcome, program, and expected results for a three-year period, play an important role in the Government’s planning and resource management processes, as well as provide a basis for ministerial accountability to Parliament by allowing comparisons of the actual results published in annual performance reports against the plans (Treasury Board Secretariat Canada, 2014). To further improve the efficiency and effectiveness of such administrative functions, the Priorities and Planning Sub-Committee on Government Administration was created in 2012 (Office of Prime Minister of Canada, 2012).

At the provincial level, although implementation can vary significantly, all ten Canadian provinces also have priority-setting/strategic planning, budgeting, and performance reporting functions as key elements of their performance management and accountability frameworks (Canadian Institute of Chartered Accountants, 2004). Hence, the increasing importance of strategic planning practices across Canadian governments makes the Canadian public sector a highly relevant and contemporary context in which to examine the strategy planning-implementation relationship.

The paper begins by exploring theoretical perspectives on formal strategic planning and strategy implementation success, developing hypotheses about the mediating effect of managerial involvement and stakeholder uncertainty on the planning-implementation relationship. Following that the data and methods employed in the study are described and the results of the statistical analyses are reported. The paper concludes by exploring the theoretical and practical implications of the findings.

---

Background and Hypotheses

Strategy implementation is defined in the literature as “the communication, interpretation, adoption, and enactment of strategic plans” (Noble, 1999: 120). As such, there is clearly a direct connection between the strategic planning process and the subsequent implementation of the decisions emerging from that process. Nevertheless, that connection cannot be taken for granted nor can it be regarded as something easily cultivated or maintained in organizations that are attempting to change strategic direction (Johnson, 2000). Critically, whatever the challenges associated with the development of effective planning processes, the implementation of strategic decisions is regarded as considerably more difficult than their formulation, and is an area where many organizations fail (Nutt, 1999; Hrebiniak, 2006). For organizational leaders, it is therefore important to consider in what ways the link between strategy formulation and implementation can be strengthened to ensure that strategic decisions are fully and properly embedded within the activities of organizational members.

The Role of formal strategic planning

A key feature of the conventional approach to strategic planning is that the formulation and implementation of plans are sequential activities. Strategy is first deliberately formulated and only then is it put into place. Nevertheless, while this may suggest strategic management is a sequential activity, each of the different stages of the planning process are not typically separate in practice, and organizations invariably evince emergent as well as deliberate or planned strategies concurrently. Control has therefore been identified as central to the implementation process (Noble, 1999), and is something that can be achieved centrally through techniques such as action plans and monitoring. According to advocates of strategic planning in the public sector, effective implementation through formal methods, such as business or project plans that identify
tasks with targets, is more likely when activities are clearly defined (Boyne, 2010). All of which is to say that one way in which public service organizations can seek to bridge the gap between formulation and implementation is to ensure that they establish strong formal planning procedures.

A number of studies of private firms have found that formal strategic planning is critical to successful implementation. For example, the use of action plans can help implementers to translate strategy into a more short term and focused plan (e.g. Hrebiniak and Joyce, 1984; Pinto and Prescott, 1990). In the public sector, several studies associate formal strategic planning with improved organizational performance more generally (e.g. Andersen, 2008; Boyne and Gould-Williams, 2003). Nevertheless, there are some authors who suggest that excessive attention to the planning process may make decision-making inflexible and thereby lead inexorably to implementation failure as managers are unable to make incremental adaptations to a plan that is seemingly set in stone (Hambrick and Connella, 1989; Mintzberg, 2000). Instead, these author(s) emphasize the need for fluid and open processes of planning and implementation to ensure that organizations can learn more effectively and respond to changes in the environment when implementing strategic plans (Montgomery, 2008).

Although there is some evidence to suggest that less formal planning processes can generate effective strategic decisions (see Parsa, 1999), Miller’s study (1997) of eleven decisions from private and public organizations, finds that strategic planning has a stronger positive influence on the success of implementation than a more ad-hoc approach in which decisions are made on an incremental basis as situations arise; in other words, more formal procedures for dealing with eventualities in advance lead to more successful implementation. In terms of organizational outcomes in the public sector, Poister, Edwards, Pasha and Edwards (2013) find
that “conducting strategic planning efforts within a larger framework of logical incremental
decision-making,... has a positive effect on some dimensions of performance, at least within the
context of the public transit service industry.” Nevertheless, other studies of the effects of
strategy process on public service performance suggest that an incremental approach to decision-
making is more likely to be unsuccessful (Andrews et al., 2009; 2011). Thus, on the balance of
prior theory and the limited available evidence, our first hypothesis is:

H1. There will be a positive relationship between formal strategic planning and strategy
implementation success.

The Mediating Role of Managerial Involvement
The likelihood of implementation success may well be increased by the adoption of formal
planning, but it is still conceivable that those organizations that place undue emphasis on
strategic planning run the risk of “paralysis by analysis” (Lenz and Lyles, 1985). An obsessive
concern with the details of the strategic plan may lead to management to overlook the need for
context-sensitive implementation within the organization, especially the buy-in of those internal
stakeholders responsible for implementing decisions – typically middle managers. To address
this potential pitfall, strategic management theorists draw attention to the role that managerial
involvement in the strategy formulation process can play in improving the quality of strategy
implementation (Floyd and Wooldridge, 1994).

The effect of formal strategic planning may be enhanced if all managers are active
participants in the process of developing strategies.3 In theory, managerial participation in

3 Strategic planning in the public sector is distinct from political public policy decision making by elected officials.
Elected officials do not participate in managerial strategic planning per se, and their roles are not part of this study.
strategy formulation demonstrates the commitment of top management to the plans that are being developed (Camillus, 1975), and increases the prospects that there is a genuine sense of ownership and commitment to strategic plans amongst those responsible for implementing them (Rajagopalan and Rasheed, 1995). At the same time, implementation quality may be improved because managerial involvement facilitates the continual adaptation of strategic plans as they are being implemented ensuring that they are “fit for purpose”. Several studies of private sector organizations suggest that strategic planning can be enhanced by encouraging managerial participation in the process. Elbanna, Thanos and Colak (2014), Nutt (1999) and Wooldridge and Floyd (1990), in particular, find that such participation results in improved implementation. And, there is good prima facie reason for thinking that such participation will also matter in the public sector, where middle managers, especially, play an increasingly important role in strategy implementation (Gatenby, et al., forthcoming; Ridder, Bruns and Spier, 2006).

Importantly, it is actually conceivable that the benefits of strategic planning for strategy implementation are attributable to the manager involvement that thoroughgoing planning processes presuppose. That is, that it is not simply the presence of formal planning that matters for implementation success, but the managerial involvement that accompanies effective strategy formulation. Our second hypothesis is therefore:

**H2. Managerial involvement** will mediate the relationship between formal strategic planning and strategy implementation success.

**The Moderating Role of Stakeholder Uncertainty**

Resource dependence theory suggests that organizations must continually seek to acquire control over resources held by other actors and organizations within their environment in order to
minimize their dependence on those entities (Pfeffer and Salancik, 1978). By minimizing their resource dependence, organizations can attain greater control over their own destiny and so build an ever stronger power base making them immune from external threats. Only by securing as high a degree of autonomy as possible from the vicissitudes of its stakeholders can any organization effectively execute its plans (Pfeffer, 1987). For public organizations, the pursuit of organizational autonomy is particularly challenging given the large number of economic and political external forces to which they are subject (Vining, 2011), and the diversity of stakeholders to whom they are accountable (Rainey, 2009). To lessen resource dependence and gain more autonomy, public organizations may adopt multiple short-term tactics ranging from internal restructuring to the cooptation of external board members (Pfeffer and Salancik, 1978). In the long run though, they are likely to need to demonstrate a capacity for fulfilling their strategic mission (Goodsell, 2011) and a reputation for high levels of reliability and effectiveness (Carpenter, 2001) if they are to be shape, as well as be shaped by, the demands of powerful stakeholders, especially elected officials whose requirements may sometimes be less predictable than other actors (Furlong, 1998). Hence, it seems likely that public service organizations will need to develop a systematic approach to integrating stakeholder management within their strategic planning processes and that the impact of this may vary depending on the degree of uncertainty around stakeholder support.

Since there is a need to proactively manage environmental dependencies, the strength of formal strategic planning may well matter more for strategy implementation success when there is a higher degree of uncertainty around sources of stakeholder support. Rigorous analysis of stakeholder needs and demands may therefore be especially important when those needs and demands are difficult to predict. Although supporters of less formal strategy formulation
processes suggest that a flexible approach is needed in the face of environmental uncertainty (Mintzberg, 1979), it is quite conceivable that more rather than less planning will help public service organizations deal with uncertain circumstances. As Armstrong (1982) puts it, “if it is clear what will happen and when, the need for planning seems small” (202). Rather than attempt to respond to stakeholder uncertainty by making decisions on an ad-hoc basis, increasing formal strategic planning processes may represent a better means for exerting managerial control over a challenging operating environment (see Eisenhardt, 1989). In fact, prior research suggests that perceived environmental uncertainty is often associated with the increased scanning of the organizational environment that is one of the key components of strategic planning (Daft, Sormunen and Parks 1988; Ebrahimi, 2000). As a result, our third hypothesis is:

**H3. Stakeholder uncertainty** will strengthen the relationship between formal strategic planning and strategy implementation success.

The model informing our investigation is depicted in Figure 1. It posits that formal strategic planning has a direct influence on strategy implementation success, and that this relationship is mediated by managerial involvement and moderated by stakeholder uncertainty. The variables included in the model have been of interest to many researchers which increases the scope for comparing the findings of our study with those of previous investigations. The study model also incorporates four control variables, which are associated with three types of context, namely, resource slack, organization size (organization), environmental favorability (environment) and strategic planning expertise (managerial capabilities).
Method

Data Collection and Sample

The context for our study is the Canadian public sector. Canada has a three-tier government structure, consisting of federal, provincial, and municipal levels. The three levels account for approximately 35, 45, and 20 percent of the total governmental expenditures, respectively, and all government expenditures are approximately 40 percent of the Gross Domestic Product of Canada (Rosen et al., 2008). At the federal level, the Government of Canada consists of departments and more autonomous agencies, whose authorities are stipulated in their respective federal statutes. Canada follows the principle of federalism, whereby political power is divided in the Constitution Act between the federal government and the ten provincial governments (Joseph, 2001), with each level being responsible for relatively distinct services. Although the provincial governments receive transfer payments from the federal government to finance some of their services, they also have the authority to levy their own provincial income taxes and sales taxes on goods and services.

Historically, there has been a sharp increase in provincial government expenditures relative to the total government expenditures (Rosen et al., 2008), indicating an increasing decentralization trend. Canadian municipalities are under the provincial jurisdiction, with their authorities granted by the provincial laws of each province (Joseph, 2001). The majority of funding for municipalities comes from local property taxes, with very little funding from the provinces, often resulting in financial pressures (Noe and Ross, 2004). Given the significant size of the Canadian public sector, and increased public pressures for accountability and transparency (Pollitt and Bouckaert, 2004), effective strategy formulation and implementation are important at all three levels.
An online survey of senior public administrators in Canadian public organizations was conducted during May - June, 2012. Survey participants were identified from the “Governments of Canada” and “Canadian Almanac and Directory” online databases accessible though the “Canada’s Information Resource Centre” data portal. In some cases, participant information was confirmed or supplemented with information from other sources, for example, organizational websites. Targeted participants were senior public officials with responsibilities for strategic planning and priority setting in organizations in which English was identified as the primary language, and for whom e-mail addresses were available.

A structured online questionnaire was used to collect data from all three major levels of Canadian governments. It was organized into four parts: strategic planning and priority setting, environment and resources, organizational and participant profile, and space for optional comments. The online survey was administered through an independent Canadian web survey host provider. Hyperlinks to the survey and the detailed cover letter were inserted into individually-addressed invitation messages sent through the account established on the survey host provider’s website. In designing the online survey, close attention was paid to the easiness of navigation through the survey, readability of the questions, and pleasing professional appearance. For example, the survey design allowed respondents to answer questions in any order, and save and modify partially completed responses. The respondents were assured anonymity and confidentiality of their responses, and they could unsubscribe from follow-up mailings. The research protocol was approved by the research ethics committee of the Canadian university which facilitated the conducting of the survey.

A total of 1,548 invitations to potential respondents (out of 1,739 names on the initial mailing list) were successfully delivered via e-mail, after disregarding a few duplicate names.
detected by the survey host software and undeliverable e-mails. The initial mail-out was followed by two rounds of reminder e-mails using the same procedures. A total of 222 individuals answered at least some questions and 191 substantially completed the entire survey by the closing date for a usable response rate of 12 percent. In the case of missing responses to a few items on a few questionnaires, the analysis is based on the number of completed responses. The number of participating organizations is 180 or 16 percent of the total of 1,133 organizations contacted. Multiple respondents were sought from selected organizations to allow the evaluation of inter-rater reliability. The sample included two respondents from each of 11 organizations. A profile of participating organizations is presented in Table 1.

The survey participants represent organizations in provincial, municipal, and federal government sectors and, in smaller numbers, in education, health care, and other public agencies. The number of responses received from each sector is consistent with the number of mail-outs to each sector. In addition, the proportions of the organizations in the study are roughly representative of the sizes of the three main sectors (federal, provincial, and municipal) at the time of the study. This suggests that the study results could be generalizable to the Canadian public sector. The number of full-time employees in the organizations ranges from 10 to 35,000, with the mean of 1,696 and the median of 300 full-time employees. Close to 60 percent of the organizations are quite small with fewer than 500 employees. Approximately one half of the organizations were established more than 40 years ago, and one quarter of them had established strategic planning processes more than 20 years ago. The respondents held senior positions, for example, associate deputy minister, president, chief administrative officer, vice president, and executive director, with close to two thirds being male.
We examined nonresponse bias by separating our sample into two sub-samples, early (original mail-out within 3 weeks) and late (reminder mail-outs within the next 5 weeks) respondents, and performed t-tests on the responses of each sub-sample based on the number of employees and the sector. The two-sample t-tests were insignificant at the p < 0.05 level, indicating no significant differences between the two samples. This may suggest that our sample is representative of the population surveyed, but it does not reveal whether or not the two groups of respondents may vary on some other characteristics.

Measures
Most questions were based on 5-point Likert scales used in prior studies, with some minor adjustments made to wording to reflect the Canadian context. A few items in some questions were initially reverse coded. On the final online questionnaire, a few questions were slightly modified based on comments by two pretest participants (of 19 contacted), two research colleagues and two technical experts on substantive and/or technical matters. Table 2 presents the statements of our measures.

Strategy implementation success. We did not find a relevant measure for the success of implementing the strategic plan. Hence, on the basis of reviewing related research (e.g., Elbanna, Thanos and Colak, 2014; Ford, Sharfman and Dean, 2008; Miller, 1997) and our concept of implementation success, that showed “how well a strategic plan has been implemented”, we adapted our measure of strategy implementation success for the purposes of this study.
Formal strategic planning. Considering related research (e.g., Armstrong, 1982; Hopkins and Hopkins, 1997; Song et al., 2011; Wheelen and Hunger, 2012), our concept of formal strategic planning as a set of activities and procedures that organizations use to develop their strategic plan, and the setting in which we conducted our study, namely, the Canadian public service organizations, a new measure of formal strategic planning was developed for the purposes of this study.

Managerial involvement. Two aspects of managerial involvement, namely, quantity and quality, have been recognized in the literature on the strategic planning process (Elbanna, 2008). Based on the arguments that quality of involvement reflects the degree to which managers at different organizational levels (Yasai-Ardekani and Haug, 1997) effectively influence strategic choices (Freeman, 1989), our new measure of managerial involvement gauges the quality of managerial involvement of top, middle and operations managers in the planning process.

Stakeholder uncertainty. Following Miller and Droge (1986), we used a three-item scale of stakeholder uncertainty. The third item was eliminated from the scale because its total correlation was under the cut-off point of 0.30 and hence the alpha coefficient of the scale was low (i.e. 0.65).

Control variables. We controlled for the effects of resource slack since it is widely argued that slack plays an important role in organizational behaviour (Bradley et al., 2011; Elbanna, 2012). Resource slack was measured with a scale of six items successfully developed and used by Elbanna (2012). Organization size was controlled because it has frequently been identified as a factor which can influence strategy processes and outcomes (Titus, Covin and Slevin 2011). In order to more fully specify our study model of implementation success, we followed Dean and Sharfman (1996) and attempted to control for the impact of environmental
favorability on the strategy implementation success. The measure of favorability was adapted from Dean and Sharfman (1996).

Scholars have argued that strategic planning expertise is a critical influence on formal strategic planning (Hopkins and Hopkins, 1997) and organizational performance (Steiner, 1979). Following Hopkins and Hopkins (1997), strategic planning expertise was measured. Including the above control variables contributed to developing a more complete model to accurately assess the impact of our independent variables, namely, formal strategic planning and managerial involvement, on the success of strategy implementation.

Measurement of Validity and Reliability

Scale reliability was evaluated using Cronbach’s alpha. The results of alpha coefficients range between 0.80 and 0.88 for all scales suggesting a very satisfactory degree of internal consistency. The average variance extracted (AVE) does not go below the recommended value of 0.50 (Hair et al., 1995). This shows the convergent validity of the study constructs. Problems of memory failure were mitigated by 1) studying the current practices of strategic planning and priority setting in the sampled organizations; 2) collecting data from managers of organizational units who are supposed to have intimate knowledge of the survey questions. This study collected questionnaires from multiple informants in 11 organizations. An inter-rater reliability analysis using the Kappa statistic was performed to determine consistency among different raters in each case. In eight out of the eleven cases, Kappa was found to range between 0.32 and 0.82 with an
average of 0.54, which shows fair to substantial agreement across the answers of multiple informants (Landis and Koch, 1977), while in three cases, it shows agreement of 0.17 and less.

Problems of bias and distortion were mitigated by 1) assuring the strict confidentiality of responses; 2) explaining how the study can help public-sector managers better understand strategic planning practices and how they can contribute to sound policy decisions; 3) promising a summary report of the results to all participants; 4) reversing scale anchors in several places; 5) using objective data to measure one of our variables, namely, organization size; 6) further diminishing common method concerns by examining complex relationships, namely, moderation and mediation hypotheses, which respondents are unlikely able to guess (Elbanna, 2012). Finally, an unrotated factor analysis of five focal variables resulted in a five-factor solution, as expected. Hence, common method bias is unlikely to be a concern in our data since a single factor did not emerge (Podsakoff and Organ, 1986).

**Empirical Analysis and Results**

The means, standard deviations, Cronbach’s alphas, average variance extracted (AVE) and correlations among the variables, are presented in Table 3. All the correlation coefficients among independent variables are below 0.60. Moreover, tolerance is well above 0.10 and VIF is well below 10 for all regression models. These results do not suggest multicollinearity problems. The relatively low to moderate correlations provided evidence of discriminant validity.

Following Anderson and Gerbing (1988), we purified the measures by assessing their validity and unidimensionality. After performing the exploratory factor analysis, a useful technique for scale construction, a subsequent confirmatory factor analysis (CFA) was conducted to assess the resulting scales and verify the validity and unidimensionality of the study measures. Adequate convergent validity for the items was established since all item measures had
standardized factor loadings of more than 0.50 with one exception only (0.43). The results indicate the good fit of the confirmatory measurement model by different indices ($\chi^2 = 272.30$, degrees of freedom [df] = 197, $\chi^2$/df = 1.38, IFI = 0.96, TLI= 0.93, CFI = 0.96, RMSEA = 0.05, confidence interval [CI] = 0.03–0.06, PClose = 0.67).

Insert Table 3 about here

Hypotheses Testing

The next step in analyzing the data was to test the hypothesized model using regression analysis (see Table 4 for results).

In order to examine the first hypothesis, we regressed strategy implementation success on our first independent variable (formal strategic planning), and the five control and moderating variables (resource slack, organization size, environmental favorability, strategic planning expertise and stakeholder uncertainty). The first hypothesis that there will be a positive relationship between formal strategic planning and strategy implementation success was supported in the hypothesized direction ($\beta = 0.44, p < 0.01$) (Model 1 in Table 4). This model explains 43 percent of the variance of the dependent variable ($p < 0.01$). Following Elbanna and Child (2007), hierarchical regression was used in order to examine the relative importance of planning in predicting the success of strategy implementation. Two equations were generated. First, strategy implementation success was regressed against the five control and moderating variables. Formal strategic planning was then added into the equation. The addition of formal planning to the Model with the five control and moderating variables in the next step added
almost 14 percent ($p < 0.01$) to the explained variance of strategy implementation success which provides additional support to the first Hypothesis.

Hypothesis 2 that the effects of formal strategic planning on strategy implementation success are mediated by managerial involvement was examined following Baron and Kenny (1986). Model 1 in Table 4 shows that strategic planning significantly affects strategy implementation success, the dependent variable ($\beta = 0.44, p < 0.01$) and hence achieving the first condition for the existence of a mediating effect. Model 2 was statistically significant (R-square = 0.47, $p < 0.01$), and shows that strategic planning significantly affects the mediator variable, managerial involvement ($\beta = 0.41, p < 0.01$) which achieves the second condition. The regression shows that when both formal strategic planning and managerial involvement are incorporated in the same model (Model 3 in Table 4), the results were significant (R-square = 0.47, $p < 0.01$) and the explained variance in strategy implementation success increased significantly ($\Delta R^2 = 0.04, p < 0.01$). Although we found that both variables – formal strategic planning ($\beta = 0.32, p < 0.01$) and managerial involvement ($\beta = 0.28, p < 0.01$) were significantly related to strategy implementation success, the explanatory value of strategic planning went down when the mediating variable, managerial involvement, was included in the regression as shown in Model 3 ($\beta = 0.32, p < 0.01$) compared to its explanatory value in Model 1 ($\beta = 0.44, p < 0.01$). This supports the third and fourth conditions for the existence of a mediating effect. In conclusion, the above results show a partial mediation effect of managerial involvement since the impact of formal strategic planning on strategy implementation success was reduced when the mediator, managerial involvement, was controlled for in Model 3. Hence, Hypothesis 2 is supported.

Hierarchical moderated regression was used to examine Hypothesis 3 concerning the moderating effect of stakeholder uncertainty on the relationship between formal strategic planning and strategy implementation success. Prior to the creation of the interaction terms, we mean-centered the independent variable (i.e., strategic planning) and the moderator (i.e., stakeholder uncertainty) based on the recommendation of Aiken and West (1991). As demonstrated in Table 4 (Model 4), stakeholder uncertainty positively moderates the relationship between formal planning and strategy implementation success since the interaction term produced a significant $\Delta R^2 (\Delta R^2 = 0.02, p < 0.01; \beta = 0.15, p < 0.01)$. To illustrate the nature of the interaction, we plotted the equation at high (i.e., 1 SD above the mean value) and low values (i.e., 1 SD below the mean value) (Aiken and West, 1991). As depicted in Figure 2, at high levels of stakeholder uncertainty the relationship between strategic planning and strategy implementation success becomes stronger ($\beta = 0.36, t = 5.66, p < 0.01$), compared to low levels ($\beta = 0.18, t = 2.77, p < 0.01$). These results lend empirical support to Hypothesis 3 that the higher the level of stakeholder uncertainty, the greater the positive impact that formal strategic planning will exert on strategy implementation success.

---------------------------------------------------------------
Insert Table 4 about here
---------------------------------------------------------------

---------------------------------------------------------------
Insert Figure 2 about here
---------------------------------------------------------------

Discussion

Strategy implementation is widely held to be a critical element of the strategy process and hence, to fully understand the connections between strategy process and public service outcomes,
scholars should also assess how well strategies are implemented (Bryson, Berry and Yang, 2010; Poister, Pitts and Hamilton, 2010). Our study contributes to filling this gap in the literature by providing scholars and practitioners of strategic management in the public sector with some important insights into strategy implementation and pointing to the variables which may influence its success in Canada’s public organizations. First, we provide evidence showing the impact of strategic planning on strategy implementation success, which lends support to our first hypothesis about the value of formal planning. Although this proposition has been widely discussed, it is rarely examined in the public sector, in which managerial strategic planning follows, and is based on, public policy decisions made by elected officials. A major strength of strategic planning is its ability to reduce uncertainty by inducing managers to look ahead and forecast the future, at least within the political term of the current government. It in turn helps to foresee changes, examine their impact, and develop appropriate responsive actions. It also helps in coordinating and integrating efforts, knowledge, and capabilities across the organization, which can contribute to successful strategy implementation.

However, a central concern in the strategy process literature has been the relative merits of planned and emergent approaches in strategy formulation (Andrews et al., 2011; Elbanna and Child, 2007). Our findings indicate that a planned or formal approach to strategy enhances its implementation in traditional bureaucratic public organizations, which typically operate within constraints posed by prior public policy decisions and short-term political orientation. This finding differs from the prior arguments of several scholars who advocate decentralized and emergent strategy formulation (e.g., Mintzberg, 2000). The difference between our results and some in prior research may be explained in part by methodological and structural differences. As pointed out by Poister et al. (2013), the impact of strategic planning may vary considerably
depending on the specification of the dependent variables, namely, the dimensions of the organizational outcomes under observation. For example, since strategy implementation is amenable to managerial control and highly affected by strategy formulation, formal strategic planning may be important, particularly in public organizations where outcomes are typically difficult to control and manage. As such, effective control in the public sector may be best exercised \textit{ex ante}, that is, through formal planning, instead of \textit{ex post} through organizational performance measurement. Hence, it is not surprising that formal strategic planning would lead to superior strategy implementation in public organizations.

Second, another contribution of this research is that it leads to a better understanding of the connection between strategic planning and strategy implementation success in public organizations. In particular, it shows that, in addition to its direct effect, formal planning has an indirect effect on strategy implementation in part through the mediating role of managerial involvement which provides support to our second hypothesis. This finding reflects Canadian practices, as department managers are responsible for implementing public policy and priorities approved at political levels, that is, managerial involvement is essential to formal planning and implementation processes. Future research should examine the effects of other mediating variables, such as employee strategic alignment, organizational learning and flexibility, which may influence the planning-implementation relationship (e.g., Ouakouak and Ouedraogo, 2013).

Third, the study supports our third hypothesis and shows that for public organizations operating in less stable or unstable environments, formal strategic planning can be especially beneficial for implementation under conditions of uncertainty. Environmental variables may moderate the planning-implementation relationship by strengthening its effects, as is the case in this study. Due to a large number of diverse stakeholders and their interdependency in public
organizations, particularly in the decentralized Canadian public sector, stakeholder uncertainty is especially relevant. Nevertheless, the strategy-implementation relationship may also be moderated by other important variables in addition to stakeholder uncertainty; and hence future research needs to take into account the moderating effects of other environmental factors, such as economic uncertainty; environmental complexity; political uncertainty; and organizational factors, such as past performance and structure.

**Implications and conclusion**

This study carries some implications for practicing public managers. First, although they are not directly involved in public policy decisions, they should know that their efforts to strategically plan for their organizations is neither a waste of time nor resources, but can, in fact, lead to successful strategy implementation. This is an indication that formal strategic planning is beneficial to public organizations. Second, the fact that strategic planning has a positive and significant impact on managerial involvement in strategic planning may mean that one of the outcomes of this involvement is the enhancement of managers’ commitment to and alignment with public policy and organizational priorities, in addition to helping managers to acquire the knowledge necessary for strategy implementation, which in turn increases the possibility of its success. In other words, to get the full benefit of formal strategic planning, public managers should conduct it in a way that enhances the effective involvement of managers in its process. Third, managers should exercise caution when tempted to assume only a direct relationship between strategy formulation and implementation because this relationship may be moderated by other factors such as stakeholder uncertainty.

Our study has some inherent limitations that should be kept in mind when interpreting and applying our results. The first important limitation is our low survey response rate. Another
potential limitation concerns the inherent subjectivity and possible bias of the items used in our survey. Moreover, the single respondent design requires caution in interpreting the results; and it would have been preferable to have had multiple respondents in order to minimize the level of systematic response bias. Fourth, the sampled organizations belong to variant government sectors, e.g., federal, provincial and municipal. Hence, the same hypotheses could be examined in sub-samples, controlling for type of sector. In addition, due to data limitations we are unable to identify which specific stakeholder groups are the source of uncertainty on this occasion. Studies that compared the moderating influence of different groups on the planning-implementation success relationship would be extremely valuable, particularly those that cast light on the relationship between bureaucrats and politicians.

Future research could enhance the understanding of strategic management specifically in public organizations in several ways. First, researchers can examine the impact of blending formal strategic planning with logical incrementalism on strategy implementation success and search for the optimal approach to use them in practice, which can further develop management theory (see, Elbanna and Child, 2007; Poister et al., 2013). Second, it is beneficial for future research to carefully consider other determinants of strategy implementation success, since it is largely influenced by a host of variables, some reasonably controllable by public organizations, e.g., organizational, capabilities, systems and processes, and others mostly beyond their control, e.g., economic conditions and political instability.

In conclusion, the research presented in this study has contributed to the knowledge of strategic management and theories of strategy implementation in general and concludes that what public managers do, in terms of strategic planning practices, matters for their organizations and the implementation of their strategies.
Table 1: Profile of participating organizations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Federal government</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>2. Provincial government</td>
<td>83</td>
<td>43.5</td>
</tr>
<tr>
<td>3. Local government</td>
<td>58</td>
<td>30.4</td>
</tr>
<tr>
<td>4. Government-controlled agency or board</td>
<td>11</td>
<td>5.8</td>
</tr>
<tr>
<td>5. Education</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>6. Health care</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>7. Other</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>B. Size (number of employees)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Less than 500</td>
<td>110</td>
<td>58.2</td>
</tr>
<tr>
<td>2. 500-999</td>
<td>31</td>
<td>16.4</td>
</tr>
<tr>
<td>3. 1,000-4,999</td>
<td>30</td>
<td>15.9</td>
</tr>
<tr>
<td>4. 5,000 or greater</td>
<td>18</td>
<td>9.5</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>C. Age of organization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Less than 10 years</td>
<td>27</td>
<td>14.2</td>
</tr>
<tr>
<td>2. 11 – 20 years</td>
<td>30</td>
<td>15.8</td>
</tr>
<tr>
<td>3. 21 – 30 years</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>4. 31 – 40 years</td>
<td>19</td>
<td>10.0</td>
</tr>
<tr>
<td>5. Greater than 40 years</td>
<td>101</td>
<td>53.2</td>
</tr>
<tr>
<td>Total</td>
<td>190</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>D. Establishment of strategic planning processes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Less than 5 years ago</td>
<td>34</td>
<td>18.1</td>
</tr>
<tr>
<td>2. 6 – 10 years ago</td>
<td>45</td>
<td>24.0</td>
</tr>
<tr>
<td>3. 11 – 15 years ago</td>
<td>41</td>
<td>21.8</td>
</tr>
<tr>
<td>4. 16 – 20 years ago</td>
<td>22</td>
<td>11.7</td>
</tr>
<tr>
<td>5. Over 20 years ago</td>
<td>46</td>
<td>24.5</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*The percentages may not add to 100 percent due to rounding off.
Table 2: Research measures

**Strategy implementation success**
- To what extent did your organization properly implement its strategic plan? (minimal extent [1], great extent [5])
- How well has each implementation task been completed? (very poorly [1], very well [5])
- How important has each implementation task been for this strategic plan? (minimally important [1], very important [5])
- In general, how satisfied are you with the implementation of this strategic plan? (very satisfied [1], very unsatisfied [5]) (reverse coded)

**Formal strategic planning** (minimal emphasis [1], great emphasis [5])
- Determining the organization’s mission
- Developing major long-term objectives
- Assessing the external environment
- Assessing the internal environment
- Generating strategic options
- Evaluating strategic options
- Gaining commitment to the strategic plan

**Managerial involvement** (highly ineffective participation [1], highly effective participation [5])
- How would you describe the participation of top management in developing your strategic plan?
- How would you describe the participation of middle managers in developing your strategic plan?
- How would you describe the participation of operations managers in developing your strategic plan?

**Stakeholder uncertainty** (strongly disagree [1], strongly agree [5])
- Our stakeholders’ preferences are fairly easy to forecast
- Actions of our stakeholders are quite easy to predict
- Our organization has to frequently change its services and practices to keep up with stakeholders’ expectations

**Resource slack**: (strongly disagree [1], strongly agree [5])
- It is very difficult to get approval for a project that is worth doing. (reverse coded)
- In terms of the availability of money, our organization’s situation is tight. (reverse coded)
- Our organization has difficulty obtaining sufficient funds to deliver its services. (reverse coded)
- Our organization has difficulty obtaining sufficient funds to introduce new services. (reverse coded)
- Our organization has difficulty in implementing its strategic plan because of the lack of the required resources. (reverse coded)
- Our organization has easy access to resources for development and improvement.

**Origination size**:
The number of full-time employees as reported by the respondents

**Environmental favorability** (strongly disagree [1], strongly agree [5])
- We faced negative unanticipated environmental conditions during the implementation of our strategic plan, which hindered its success. (reverse coded)

**Strategic planning expertise** (very Low [1], very high [5])
How do you evaluate the level of expertise that exists to perform strategic planning in your organization?
Table 3: Descriptive statistics and correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>Alpha</th>
<th>AVE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strategy implementation success</td>
<td>3.75</td>
<td>0.71</td>
<td>0.80</td>
<td>0.57</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Resource slack</td>
<td>2.57</td>
<td>0.78</td>
<td>0.85</td>
<td>0.50</td>
<td>0.38**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Formal strategic planning</td>
<td>3.85</td>
<td>0.90</td>
<td>0.88</td>
<td>0.50</td>
<td>0.59**</td>
<td>0.32**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Managerial involvement</td>
<td>3.55</td>
<td>0.75</td>
<td>0.80</td>
<td>0.59</td>
<td>0.59**</td>
<td>0.34**</td>
<td>0.58**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Stakeholder uncertainty</td>
<td>2.74</td>
<td>0.90</td>
<td>0.84</td>
<td>NA</td>
<td>-0.02</td>
<td>-0.03</td>
<td>0.02</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Organization size</td>
<td>1696</td>
<td>4459</td>
<td>NA</td>
<td>NA</td>
<td>-0.08</td>
<td>0.00</td>
<td>0.04</td>
<td>-0.14</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Environmental favorability</td>
<td>3.04</td>
<td>0.99</td>
<td>NA</td>
<td>NA</td>
<td>0.11</td>
<td>0.26**</td>
<td>0.11</td>
<td>0.10</td>
<td>-0.05</td>
<td>0.01</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8. Strategic planning expertise</td>
<td>3.59</td>
<td>0.92</td>
<td>NA</td>
<td>NA</td>
<td>0.44**</td>
<td>0.20**</td>
<td>0.44**</td>
<td>0.51**</td>
<td>-0.10</td>
<td>0.02</td>
<td>0.06</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal strategic planning</td>
<td>0.44**</td>
<td>0.41**</td>
<td>0.32**</td>
<td>0.34**</td>
</tr>
<tr>
<td>Stakeholder uncertainty</td>
<td>-0.01</td>
<td>0.03</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>Resource slack</td>
<td>0.20**</td>
<td>0.15*</td>
<td>0.16**</td>
<td>0.18**</td>
</tr>
<tr>
<td>Organization size</td>
<td>-0.10</td>
<td>-0.17**</td>
<td>-0.06</td>
<td>-0.07</td>
</tr>
<tr>
<td>Environmental favorability</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.00</td>
</tr>
<tr>
<td>Strategic planning expertise</td>
<td>0.21**</td>
<td>0.31**</td>
<td>0.12</td>
<td>0.10</td>
</tr>
<tr>
<td>Managerial involvement</td>
<td></td>
<td>0.28**</td>
<td></td>
<td>0.27**</td>
</tr>
<tr>
<td>Stakeholder uncertainty *formal strategic planning</td>
<td></td>
<td></td>
<td></td>
<td>0.15**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.43**</td>
<td>0.47**</td>
<td>0.47**</td>
<td>0.49**</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.41**</td>
<td>0.45**</td>
<td>0.45**</td>
<td>0.47**</td>
</tr>
<tr>
<td>$\Delta R^2$ from Model 1 to Model 3</td>
<td></td>
<td></td>
<td>0.04**</td>
<td></td>
</tr>
<tr>
<td>$\Delta R^2$ from Model 3 to Model 4</td>
<td></td>
<td></td>
<td></td>
<td>0.02**</td>
</tr>
</tbody>
</table>

** Significant at the 0.01 level; * significant at the 0.05 level.
Figure 1: Research model

Control variables: Resource slack; organization size; environmental favorability; strategic planning expertise
Figure 2: Interaction plot
References


Floyd, S., and Wooldridge, B. (1994) Dinosaurs or Dynamos: Recognizing Middle Management’s Strategic Role. *Academy of Management Executive*, 8:4 pp47-57


URL: http://mc.manuscriptcentral.com/rpxm Email: Isobel.speedman@ed.ac.uk


Dear Professor Stephen Osborne

Thank you very much for giving us the opportunity to revise our paper. We would also like to thank the first reviewer for his/her positive feedback and the second reviewer for the additional useful suggestions to improve the paper. We have carefully responded to all suggestions of the second reviewer as shown below.

Thank you for your consideration; we look forward to hearing from you.

The authors

Responses to Reviewer # 2 Comments

1. **Comment:**
   
   I think this paper makes a noteworthy contribution to the literature. It gets at important questions about the linkages between strategic planning, managerial engagement, stakeholder uncertainty, and implementation success. It appears to be well and competently done. There are some issues around claimed validity and sample size that need to be acknowledged, but basically the paper is well done. This revision is much improved over the first version. I just have a few comments:

   **Response:**
   Thanks for your positive feedback on our previous revision and encouragement. We have addressed the remaining issues as shown below.

2. **Comment:**
   
   P. 7, lines 51-58. I would rephrase "...as situations arise; in other words, more formal procedures for dealing with eventualities in advance lead to more successful implementation."

   **Response:**
   This is a very helpful comment. This sentence has now been rephrased in line with the reviewer’s suggestion.

3. **Comment:**
   
   P. 15, line 30. Pre-validated how? From what you say later, I don’t know how to interpret this.

   **Response:**
   We have edited this sentence to remove this confusion. Thanks!
<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. 15, line 53. What current measure of strategy implementation success?</td>
<td>It refers to the measure we used in our study. We modified the concerned sentence to clearly show this meaning.</td>
</tr>
<tr>
<td>P. 24, line 56. An important potential limitation is your pretty low survey response rate. You need to acknowledge that here.</td>
<td>Thank you for bringing our attention to address this important limitation. Please, see Page 24.</td>
</tr>
<tr>
<td>P. 25, line 52. Add to the last sentence “... matters for their organizations and the implementation of their strategies.”</td>
<td>We have added the suggested words. Thank you.</td>
</tr>
</tbody>
</table>