

IMPACTS OF STRATEGIC PLANNING AND MANAGEMENT IN MUNICIPAL GOVERNMENT: AN ANALYSIS OF SUBJECTIVE SURVEY AND OBJECTIVE PRODUCTION AND EFFICIENCY MEASURES IN NORWAY

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Abstract

This article analyses impacts of formal strategic planning, strategic types, stakeholder involvement, and their interactions on performance in Norwegian municipalities. Internal stakeholders often overstate their organization's performance. Therefore, the analysis complements subjective survey data on strategic planning, strategy content and the senior officials' perceptions of the impacts of the strategic planning, with more objective administrative data of municipal production, efficiency and change in efficiency. Moderated multiple regression analyses show that strategic planning and a defender strategy had positive perceived impacts. The analyses with administrative data for performance showed little significant positive impacts of strategic planning, strategy content and stakeholder involvement.

Keywords

Local authorities, performance, public management, strategic planning, strategic types

INTRODUCTION

Conducting research on the impacts of strategy and planning is notoriously challenging. Despite the long history of using and criticizing formal strategic planning, there is still little conclusive empirical evidence of its practices and impacts on production, efficiency and improvement in the public sector. A meta-analysis of empirical studies of management and performance in local government found that rational planning and related techniques (benchmarking, targets, and performance management) are likely to improve performance but that the impact of strategy content (how organizations broadly adapt to their environment) is moderate (Walker and Andrews 2015). Moreover, in some of the empirical studies that so far have been carried out, the results are partly surprising and partly contradicting. Andrews, Boyne, Law and Walker (2012), in their extensive research programme on the impact of strategic management on public service performance, found for instance no significant impact of rational planning in itself on performance in Welsh multi-purpose local authorities but also that an absence of strategy was detrimental to performance. They did, however, find that other elements of strategic management such as strategy content and formulation made a difference to performance, but were subject to environmental contingencies as well certain positive combination (interaction) effects between the strategy elements. Andrews et al. (2012, 161) concluded that: 'Future work could usefully examine whether the contingencies that we have identified hold in other national, institutional and organizational contexts'.

In a recent study of US single-purpose local transit agencies Pasha, Poister and Edwards (2015) found a positive impact of formal strategic planning but no impact of combinations of strategy content and strategy formulation methods, as Andrews et al. (2012) found in their research. In an even more recent study Elbanna et al. (2016) also found a positive and significant impact of formal strategic planning on implementation success in Canadian public service organizations. Recent empirical research that has been carried in the public sector both in North America and the United Kingdom show, therefore, that there is no ‘one size fits all’. We therefore need more research on the practices and impacts of strategic planning in public management in different contexts.

Bryson, Crosby, and Bryson (2009) identified several reasons why strategic planning may be popular – including faddishness, coercion (public planning regulation), and pressure from professional norms – but also that strategic planning seems to work for some, particularly decision-makers such as elected politicians, top management and planners. The mechanism that explains why strategic planning is supposed to work is ‘[...] that decision makers figure out what their organizations should be doing, how, and why. In other words, strategic planning in some circumstances may provide a *way of knowing* helpful to decision makers’ (Bryson, Crosby, and Bryson 2009, 173). However, the same authors argued that whether it works, how, where, and for whom, were open questions. In order to understand these issues, they recommended that studies pay close attention to contexts and how actors, practices and learning were connected; for example, by actor–network theory or action research (‘small-N’) studies. Such studies may help explain why strategic planning, as a way of knowing, is useful for some practitioners and stakeholders, but may be less applicable for analysing whether strategic planning works across many organizations and for production, efficiency and improvements.

In a review of the strategic management research, Poister, Pitts, and Edwards (2010) called for more ‘large-N’ quantitative analyses of strategic planning processes and outcomes. Bryson, Berry, and Yang (2010, 505) summarized their review of the literature with ten recommendations for future research. In one of these recommendations, they stated that ‘Considerable progress has been made in understanding how to integrate strategic planning and management tools with strategic management processes, but the extent and effectiveness of doing so in practice has been little studied.’ Therefore, the present article aims to fill some of the gap in the literature. The article contributes by conducting a variance type (‘large-N’) study that describes some of the practices in strategic planning in the public sector, including integration of the planning in other management processes for budgeting, performance management and evaluation, the choice of strategic types, and stakeholder involvement. The article also analyses the impacts of strategic planning in an important and often studied type of organization (municipal governments) in the public management strategy literature, but in a country (Norway) that is seldom studied in this literature.

Municipal government is important for public sector strategic planning and is an interesting research setting. Municipalities have responsibility for important tasks and services in modern welfare states, and govern vast public resources. Some of these tasks and services are delegated from central government, while others are produced based on local political and strategic choices. Regardless of the mandates for such tasks and services, the municipalities need policies and strategies for their governance and use of public resources. For example, Norwegian law mandates municipalities and counties to produce an area plan with a long-range planning horizon. As part of the regulation, the municipalities must also produce a 4-year plan with a rolling financial budget, and must annually report financial accounts and statistics on activities and results in a national municipal-to-central-government-performance-reporting system. The long-range planning emphasizes spatial planning and a wide consultation processes; the medium-range planning emphasizes service

provision and financial planning and the short-term planning emphasizes measurement and reporting. There are specific regulations regarding the processes of the long-range spatial planning, the medium-range financial planning and the annual reporting, but there is little regulation concerning the formulation and content of the strategies. Therefore, municipalities have a great deal of discretion in their strategic planning. However, the impact of these practices has not been thoroughly documented. Therefore, it will be interesting to study whether and to what extent local government organizations such as municipalities use strategic planning in their management and analyse its impact.

Thus, the research problem is to explore what impact strategic planning and management have in Norwegian local government. The research questions are: Does strategic planning have positive impacts? Does strategy content have positive impacts? Does stakeholder involvement in the strategic planning process have positive impacts? How do practitioners assess the impact of strategic planning relative to other sources of impact?

Many previous studies have analysed separate aspects of strategic management and strategy content, especially in Anglo-American countries. The present article replicates a survey instrument of strategic planning and management previously used in US municipal government (Poister and Streib 2005) and survey questions on strategy content previously used in English local authorities (Andrews, Boyne and Walker 2006). The present article contributes by adding to the knowledge on the impacts of strategic planning, strategy content and stakeholder involvement in the public sector, including certain environmental, political and administrative factors that have previously been mentioned as potentially important. Moreover, by providing empirical evidence on the impact of strategic planning and management in contexts outside the often-studied United States and United Kingdom, this article contributes by analysing the generalizability of core public sector strategy theories.

Assessing the impacts of strategic planning and strategy content in public management is conceptually and empirically challenging. The performance of public sector organizations may be judged by their outputs such as services and short-term and long-term outcomes (Boyne 2010; Boyne and Walker 2004). Relevant data are often lacking, particularly data for effectiveness, and those data that are available are also somewhat subjective (Schachter 2010). Moreover, internal stakeholders often overstate their organization's performance (Andrews et al. 2010). Survey data of administrators' self-perceptions of organizational performance are prone to common source bias and can produce spurious results (Meier and O'Toole 2013). Therefore, the analysis in the present article complements the survey data on strategic planning and management, strategy content and administrators' subjective perceptions of the impact of the strategic planning with more objective archival (administrative) data of municipal production and efficiency.

The remainder of the article is organized as follows. Section 2 reviews theory, presents a conceptual framework, and presents hypotheses. Section 3 documents the research method and data. Section 4 analyses the results. The final section discusses and concludes.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

As mentioned, there are major opportunities for further research on strategic planning and its impacts, in particular outside the most often-studied contexts of North America and the United Kingdom. In a review of strategic planning and public service improvement, Boyne (2010, 74) argued that: 'Prominent amongst these is the need for evidence on more nations and a wider set of services, and for studies to include measures of all stages in the planning cycle, and measures of staff involvement in (and commitment to) these stages. In particular, the task and institutional environments of organizations that attempt planning need to be given more consideration.' Therefore, this analysis utilizes a model of strategic planning that

conceptualizes strategic planning as a process, where some organizations may be in the planning formulation stage and others may have produced final plans. Moreover, the analysis conceptualizes strategic planning as an integrated part of other management processes (Poister and Streib 1999; Vinzant and Vinzant 1996) that involves both strategy content (Boyne and Walker 2004) and stakeholder involvement (Poister and Streib 2005), and that are subject to environmental contingencies.

Figure 1 here

Figure 1 shows the conceptual framework for this analysis. Merely producing strategic plans may have only modest, if any, impacts on performance (Boyne 2010). Therefore, we may expect that several factors influence the impact of strategic planning, particularly the integration of strategic planning in other management processes (Poister and Streib 2005), the content of the strategy (Boyne and Walker 2004), and the involvement of stakeholders in the strategic planning process (Bryson 2011).

Integrating the strategic planning in other management processes – especially budgeting, performance management and evaluation that facilitates continuous learning and allocation of resources – has positively affected how senior municipal officials (city managers, finance directors and chief administrative officers) in US cities perceive the impact of the municipal strategic planning (Poister and Streib 2005). A study of US city governments during the great recession found that strategic planning was associated with perceptions of improving the city governments' fiscal health, but found no effect on actual deficits (Jimenez 2013). An analysis of public transport companies in the USA found no positive impact from formal strategic planning on operating efficiency or cost-effectiveness measures, but did find some positive impact on service effectiveness and system productivity measures (Poister et al. 2013). Hence, I hypothesize that formal strategic planning and management increase perceived impacts (H1) and have positive effects on at least some administrative measures of performance (H2).

Hypothesis 1: Strategic planning and management increase perceived performance.

Hypothesis 2: Strategic planning and management increase performance on some administrative measures of performance.

Strategy content should also be expected to have impacts because the content influences the organization's fit to the environment and hence performance. There are several frameworks for analysing public sector strategy content. These include the Porterian generic positioning model (Vining 2011), the resource-based perspective (Hansen and Ferlie 2016), and the market-focused competition contingency model (Hodgkinson and Hughes 2014). The present analysis builds on Miles and Snow's (1978) framework, later developed for a public sector context by Boyne and Walker (2004), which states that organizations adapt by managing entrepreneurial, engineering and administrative problems in a cycle. The entrepreneurial problem consists of making product and market choices. The engineering problem is choosing technologies for production and distribution. The administrative problem has a leading aspect, where management selects areas for future innovation, and a lagging aspect that requires rationalization of structures and processes. The important strategic implication from Miles and Snow's framework is that organizations seem to adapt in four organizational types: defenders, prospectors, analysers and reactors.

Defenders focus on their core domains and emphasize control and technical efficiency. *Prospectors* typically continually search for market opportunities and regularly experiment with new responses to changes in environments and trends. *Analysers* are a blend of the defender and prospector types. *Reactors* perceive change and uncertainty as other organizations do but are unable to respond effectively. These organizations have no effective strategy and seldom respond unless forced to from the outside.

Boyne and Walker (2004) adapted the Miles and Snow framework of strategic types and developed a framework for strategy content in public management. Boyne and Walker conceptualized strategy content as consisting of both strategic stances and accompanying strategic actions for underpinning these types. They defined *strategy content* as 'the patterns of service provision that are selected and implemented by organizations' (Boyne and Walker 2004, 231). Moreover, they discarded analysers from the framework because this type is a mix of defenders or prospectors, which they argued made it redundant. Organizations may mix strategic types because they can adapt differently such as innovate (prospectors), consolidate (defenders), and await instructions or political commitment (reactors) in different policy and service areas.

There are many empirical studies of strategy content and local government organizations' performance using the Miles and Snow framework, especially in the USA and UK contexts (Andrews et al. 2005; Andrews, Boyne, and Walker 2006; Meier et al. 2007; Andrews et al. 2009a, 2009b). Their different results are congruent with an overall view that no strategic type is superior in all circumstances. Based on evidence, mostly from the US and UK, the research contradicts Miles and Snow's original conception of the supremacy of one distinct strategic type by indicating a mix of defender and prospector types ('analysers') aligned with organizational structures and processes improves performance (Walker 2013). Therefore, I hypothesize that the strategic types of defender (H3) and prospector (H4) both have positive impacts.

Hypothesis 3: Local governments with a defender strategy have good performance.

Hypothesis 4: Local governments with a prospector strategy have good performance.

Many authors have highlighted the importance of stakeholder involvement in decision-making and strategic management (Bryson 2004; Poister and Streib 2005). For example, stakeholder involvement from affected parties such as citizens and businesses may improve the quality of the decision-making (Mulgan 2009). Involving politicians and top management may increase commitment to the strategy (Moore 1995). Involving middle management and employees may reduce resistance towards change (Brunsson 1985). However, there may be a trade-off in stakeholder participation in decision-making between effectiveness and legitimacy of the outcome, depending on the size and system capacity (Dahl and Tufte 1973). There is a significant discourse in the strategy literature on the merits of planning as a top-down approach versus a more bottom-up approach of learning and 'emergence' (Mintzberg 1994). Therefore, I hypothesize that stakeholder involvement in general will improve the impact of the strategic planning (H5), but I also acknowledge that stakeholder involvement is a complicated issue.

Hypothesis 5: Local governments with high stakeholder involvement in the strategic planning have good performance.

Some studies have analysed moderation effects by including interaction terms between strategic planning, strategy formulation, strategy content and the environment (Andrews et al.

2012). Pasha, Poister and Edwards (2015) studied the interaction between strategy formulation and strategy content and their impacts on performance in US public local transit agencies. Their study did not, however, find any positive interaction effects of prospectors and ‘logical incrementalism’ and defenders and ‘formal strategic planning’, as they expected based on theory from the Miles and Snow (1978) framework and hypotheses from Andrews et al. (2012). Hence, the model in figure 1 has only dotted lines indicating contested moderating effects of strategy content on performance. Given the importance of the Miles and Snow framework for theory and practice these authors concluded that more research was needed in ‘more contexts, using more sophisticated methods and measures of performance, and under varying environmental conditions to reach a conclusion on its validity’ (Pasha, Poister and Edwards 2015, 22). The empirical analyses in this article therefore include interaction terms.

The analysis also takes into account task and environmental contingencies by incorporating political, demographic and financial factors that may influence the impacts of the strategic planning. These factors are modelled as control variables and are documented in the methods and data section.

METHODS AND DATA

The research design is a cross-sectional analysis (variance study) that replicates certain research instruments and utilizes both primary (survey) and secondary (administrative) data from municipal government in Norway.

Variables and measurement

The collection of the primary data replicated two previous surveys measuring strategic management and strategy content in municipalities. Poister and Streib’s (2005) survey instrument was shortened and some of the questions adapted to fit the Norwegian context. I took single-item questions on strategy stances and actions from Table 1 in Andrews, Boyne, and Walker (2006). The resulting survey instrument posed questions on the municipalities’ production of a separate strategic planning document in addition to mandatory planning documents; stakeholder involvement in the production of the strategic planning document; the use of strategic planning elements (tools); strategic stances and strategic actions; the relationship between strategic planning and budgeting, performance appraisal, and performance management; and perceived impacts of strategic planning. Most variables were measured with Likert scales, with five categories from ‘strongly disagree’ to ‘strongly agree’ including a neutral ‘neither disagree nor agree’. All the data were collected after the international financial crises in 2008 but before the plunge in the petroleum prices in 2014.

I used eight indexes – five subjective and three objective measures – to analyse different dimensions of the impacts. All of the dependent variables were measured after the independent variables that were measured prior to 2011/2012. The first index measured the perceived overall impact of strategic planning and management. This index was computed by adding the scores on the Likert scale for 19 questions on impacts in the survey, and dividing this total by the number of questions to get an unweighted index for overall impact. This index was based on a similar (additive) index developed by Poister and Streib (2005). Table 1 documents the 19 questions included in this index with their means. The perceived overall impact index has a Cronbach’s alpha reliability of .94. The perceived overall impact index varies from a theoretical minimum of 1 to a theoretical maximum of 5, with 2.5 as a lower threshold for a positive subjective assessment of the overall impacts.

Table 1 here

The index for the perceived overall impacts is a measure that aggregates many different dimensions of impacts. In order to discern specific dimensions of impacts and ascertain that the resulting variables have construct validity, a factor analysis (principal component analysis) was conducted. The results of the factor analysis are reported in Table 2.

Table 2 here

Table 2 shows the 19 items used to measure elements of perceived impacts of strategic planning and the items' loading on each of four factors resulting from the analysis. By deleting a few items due to low or incorrect factor loadings, these four components fit the following elements: 'managing operations' (the engineering problem), 'managing goals' (the entrepreneurial problem), 'managing people' (the administrative problem), and 'managing external relations' (network management) (Miles and Snow 1978). I therefore developed indexes, each comprised of two to six items based on questions in the survey, for each of the four elements of the perceived overall impacts. (The items used in the indexes and in the calculation of the alpha reliability scores for the indexes are outlined with **bold** in Table 2.) The four resulting indexes are termed *managing operations*, *managing goals*, *managing people*, and *managing external relations*. The Cronbach's alpha scores for three of these indexes varied from .85 to .90, which indicates good reliability. The Cronbach's alpha score for the managing external relations index (with two items) was only .60, but was deemed satisfactory for the purpose of this analysis. The four indexes were subsequently used as dependent variables in the analysis of elements in the subjectively perceived impacts.

The administrative data for the production index, efficiency index, and change in efficiency index (improvement) measures were produced by independent researchers to be used in government analyses (Committee for Technical Calculation of the Municipal and County Finances 2014) appointed by the Ministry of Local Government and Modernization. Consequently, these administrative data are totally independent of the survey data.

The index measuring the municipal production for 2013 is composed of sub-indexes for kindergartens, primary schools, health-care, childcare, social services, and culture services. These services comprised 73 per cent of the municipal operating expenses in 2013. The remaining municipal services (administration, technical services, transportation, housing and commercial development) were omitted from the official production index because it was difficult to develop good indicators for the service production in these services. The production index is normalized such that the weighted mean with the number of municipal inhabitants as weights is 100 for all the municipalities that were included in the index. The production index is a measure for the production relative to the size of the target group and is, in itself, not a direct measure for efficiency (Committee for Technical Calculation of the Municipal and County Finances 2014, Appendix 11). Table 3 documents the services and sub-indexes with weights for the production index.

Table 3 here

Of the final two indexes, one measures an aggregate score of efficiency in the municipal service production in 2013, and the other measures the change in the efficiency score from 2010 to 2013. The efficiency scores are based on data envelopment analyses (DEA) of three main municipal services: kindergartens, primary education, and home care. These three services comprised 64.6 per cent of gross operating expenses in the municipal sector in 2013. The analyses produced a score for technical efficiency (assuming increasing returns to scale) that varies from 0 to 1, where 1 is for the most efficient municipalities (Committee for Technical Calculation of the Municipal and County Finances 2014, Chapter 8).

In order to investigate Hypotheses 1 and 2, I measured strategic planning and management, the first independent variable, as a continuous measure by developing an unweighted additive index based on 15 questions in the survey. The strategic planning and management index was based on a similar index used by Poister and Streib (2005). The strategic planning and management index is comprised of a question on strategic planning, four statements on budgeting, three statements on performance appraisal, and seven statements on performance management from the survey. The answers on strategic planning alone were recoded to one variable with the values ‘no strategic plan’ (value=0), ‘has initiated one or more strategic plans’ (value=1), or ‘completed one or more strategic plans’ (value=2) in addition to the mandatory planning requirements. The other questions used a Likert scale with five values, ranging from ‘disagree strongly’ to ‘agree strongly’ (coded from respectively 1 to 5). The index for strategic management could theoretically vary from a minimum of 14 (‘no strategic plan’ and ‘disagree strongly’ on all other 14 questions) to a maximum of 72 (‘has completed one or more strategic plans’ and ‘agree strongly’ on all other questions). Table 4 reports the items included in the index with their mean scores.

Table 4 here

In order to investigate Hypotheses 3 and 4, the survey included three questions on strategic types. Strategic type was measured by adapting three measures for strategic stances from Table 1 in Andrews, Boyne, and Walker (2006). These questions probed the municipalities’ inclination to innovate and develop new services (prospectors), focus on improving existing services (defenders), and adapt to external pressure (reactors). The use of scales rather than categories for these three types implies that the municipalities may mix several strategic types, including mixing defender and prospector into what is effectively an analyser type. Table 5 presents the three questions used to measure strategic types, along with their mean scores.

Table 5 here

In order to investigate Hypothesis 5, I developed a stakeholder involvement index. Table 6 presents the questions used with their mean scores. The stakeholder involvement index was calculated summing the scores on the five-point Likert scales for the six questions from the survey on stakeholder involvement and dividing the total by six, for the municipalities that had initiated or completed one or more strategic plans. The stakeholder involvement index has a Cronbach’s alpha reliability score of 0.63, which is acceptable.

Table 6 here

Secondary data from official statistics (Statistics Norway) were used for measuring six control variables.

Political regime was measured as the ratio of socialist representatives in the municipal council in the 2007–2011 election term. The representatives from the Labour Party, Socialist Left Party, Red Election Alliance, Red, and Norwegian Communist Party, were categorized as socialist.

Political uncertainty was measured using the Herfindahl index for party concentration in the municipal council in the 2007–2011 election term. The number takes the value 1 when a single party takes all the seats and a lower number indicates increasing party competition and hence increasing political uncertainty.

Environmental instability was measured as the average annual percentage change in the municipal population during the latest three years (1 January 2009–1 January 2011).

Environmental heterogeneity was measured in a way similar to the measure of ethnic diversity used by Andrews, Boyne, and Walker (2006). I utilized data for the 2011 municipal population with inhabitants born in Norway, or immigrants or inhabitants born to immigrants from either Europe except Turkey, Asia including Turkey, Africa, North America, Central and South America, or Oceania. I developed a Herfindahl index to measure ethnic diversity. I squared the proportion of each group in the municipal population and then subtracted the sum of these squares from 1. This measure gives an approximation to population fractionalization and hence environmental heterogeneity in the municipality. A high score on the index represents a great deal of heterogeneity.

Financial surplus was measured with a variable for average net operating results after interests and mortgages as a percentage of total operating incomes (net operating results margin) 2008–2010. The county governors, on behalf of the government, recommend an annual net operating results margin of 3–5 per cent as sound municipal financial management.

Local government size was measured as the municipal population as of 1 January 2011.

Population and sample

The population for this study was the 430 municipalities in Norway as of November 2011. The survey was designed as a multiple-informant study and was sent by email to three senior officials in each municipality – the mayor, the chief administrative officer and the chief financial officer – in November 2011. After three reminders, a total of 182 responses were received by February 2012. One response was discarded due to technical problems. Only five municipalities provided two responses each, and these responses have been averaged and rounded to integer values in order to provide a single score for the municipalities. Therefore, 176 of the 430 municipalities responded, a response rate of 41 per cent. In total, 143 of the 176 municipalities responded that they had initiated or completed strategic planning; this is the usable sample for the analysis.

Analysis of non-response and common source bias

Table 7 documents an analysis of non-response. There were only small differences between the population and the sample but the municipalities in the sample were slightly more efficient and larger than all the municipalities in the population.

Table 7 here

Using self-reported data from the same survey instrument to measure the independent and dependent variables may introduce common source bias, in addition to the potential problem with using subjective impact data. In order to investigate the potential for common method variance to be influencing the results, I employed Harman's one-factor test. The results showed that, for the 143 municipalities that answered all the questions in the survey, one factor explained less than 30 per cent of total variance; this is below the common threshold of 50 per cent used for indicating common source bias. Although Harman's one-factor test is not conclusive, it does indicate that the results are reliable with regards to common source bias.

RESULTS

Table 8 provides descriptive statistics and reliability scores for the variables used in the analysis for the municipalities in the usable sample. The mean score for the perceived overall impact index was 3.65, indicating a positive subjective assessment of the overall impacts of strategic planning, and in particular for its perceived impact on managing goals.

Table 8 here

The bivariate correlation analysis in table 9 show that the subjective variable indexes *managing operations*, *managing goals* and *managing people* correlated significantly with the subjective perceived overall impact index (from .89 to .91), while the *managing external relations* subjective variable index only correlated significantly (.63) with the overall impact index. The five subjective impact indexes had very low correlations with the three objective measures for production, efficiency and change in efficiency, ranging from -.11 to .09, none of which were significant. None of the independent variables correlated more than 0.7, which could have caused problems with multicollinearity in regression analyses.

Table 9 here

The regression analyses of strategic management impacts use the perceived impact indexes and the production, efficiency and improvement in efficiency indexes as dependent variables. The stakeholder involvement index in the regression models used data from questions that only were posed to municipalities that had initiated or completed one or more strategic plans in addition to mandatory planning documents (N=100). Therefore, the number of usable cases for the regression analyses was restricted to these cases. When pooling survey and secondary data, missing data in the production and efficiency variables reduced the number of usable cases in some of the models, even below 100. A test of the available sample of the 100 municipalities responding on the stakeholder involvement questions and all the other variables used in the regression models, indicated that the data were missing completely at random (Little's MCAR test: Chi-Square = 76.886, DF = 69, sig. = .24). Except for missing data in two cases in the independent variables all the remaining missing data, ranging 11–15 per cent of the number of cases, were in the three dependent variables with

administrative measures. Therefore, the regression models were run with only complete cases (listwise deletion) and the missing cases should not pose a threat for producing biased results.

In order to be able to test for effects on performance from interaction between strategy content and strategy implementation, this study adapted two measures that have been used by Andrews et al. (2012) and Pasha, Poister and Edwards (2015). These studies used specific survey questions on formal strategic planning and logical incrementalism in measuring interaction between defenders and formal strategic planning and between prospectors and logical incrementalism, which the survey in the present study did not. Therefore, the index consisting of the use of strategic planning documents and management tools was used as an alternative measure of formal strategic planning. Moreover, stakeholder involvement was used as a proxy for (logical) incrementalism due to the following reasoning. Prospectors may typically adapt to different parts of the environment by decentralization and extensive participation in decision-making. Logical incrementalism is a ‘decision-making process heavily influenced by politics, stakeholder interactions, culture, group processes, and interpersonal relationships’ and ‘(d)ecisions are taken through negotiations with other stakeholders and subjective analysis of data instead of rational analysis and effectiveness concerns’ (Pasha et al. 2015, p. 5). The ‘Nordic model’ is highly dependent on incrementalism and stakeholder involvement. Many stakeholders were substantially involved in the Norwegian municipalities’ strategic planning (see table 6). Therefore, stakeholder involvement (in this context) may resemble logical incrementalism. This study therefore measures the interaction between defenders and formal strategic planning and between prospectors and stakeholder involvement. In order to reduce multicollinearity, the variables used in the two interaction terms were mean centred. This procedure substantially reduced the problem of multicollinearity.

Table 10 here

Table 10 reports the resulting regression models, including interaction effects between defenders and (formal) strategic planning and management and between prospectors and stakeholder involvement (logical incrementalism), with the highest explained variance. The five models with dependent variables based on perceptions explain total variance well with adjusted R squared ranging from .27 to .47. The models with administrative performance data explain aggregate production and efficiency well (adjusted R squared .21 and .52, respectively), but explain little of the total variance in change in efficiency. Four of the eight models had significant interaction terms that produced similar or improved adjusted R squared compared to the ‘baseline models’ without interaction terms. The models with interaction terms improved the adjusted R squared compared to the baseline models by a modest .009–.025.

The results corroborate hypothesis 1 but not hypothesis 2. The analyses indicate that producing strategic planning documents, and linking the strategic planning to budgeting, performance management and evaluation (formal strategic planning and management), improves the overall impacts of strategic management, as perceived by administrators in the municipalities, but has no impact on administrative data on performance. However, for practical purposes the effects of formal strategic planning were marginal. The results only partially corroborate hypothesis 3. The analyses indicate that a defender strategy improves the perceived impacts of strategic management in municipal government but has no significant positive impact on the administrative measures of performance. Hypothesis 4 on a positive impact of a prospector strategy lacks empirical corroboration, both based on

perception-based and administrative data. Hypothesis 5 on a positive impact of stakeholder involvement on performance was empirically corroborated only in one of the four models with subjective performance measures (the managing people index) and in one of the three models with administrative performance measures (the production index). Moreover, when interaction terms for strategy content (prospector) and stakeholder involvement were included in the analyses stakeholder involvement ceased to have significant positive effects in most of the models. Finally, there seemed to be little or no positive impact of combining a defender strategy with formal strategic planning and management or combining a prospector strategy with stakeholder involvement (incrementalism), corroborating the results that Pasha, Poister and Edwards (2015) found. Interestingly, in some models the perceived impact improves with strategic planning and management, but up to about half of that improvement is undercut when combined with the defender strategy.

On face value, therefore, strategy content does seemingly not improve performance. Recall, however, that strategic types were probed with single-item, largely single-respondent perception measures, and may not have tapped adequately *factual* organizational behaviour, which the concept of strategy content was supposed to cover (Boyne and Walker 2004). This measurement problem is accentuated when the strategic type variables are used in the interaction terms. Measurement error is a prevalent problem in analyses with moderation effects, and implies that when one or both of the variables in the interaction term have bias the measured moderation may be overstated or understated (Aguinis, Edwards and Bradley 2016). The seemingly small moderation effects of strategy processes and strategy content in the present analysis may therefore be biased.

Moving from methodological to substantial explanations of the small and negative interaction effects of defender and formal strategic planning and management on the perception-based performance measures, there are interesting interpretations. For example: Formal strategic planning and management combined with defending, often at the organizational level, can be perceived as rigid and ritualistic and adding little value because the competence and routines to manage the core operations already reside within the departments and services. Moreover, formal strategic planning often concerns adapting and improving also core operations, which is the main concern in a defender strategy. Therefore, combining defending and planning may diminish perceived performance because one of them is seen as redundant.

DISCUSSION AND CONCLUSIONS

The finding that formal strategic planning and management and to some extent also choosing a defender strategy improves performance corroborates the notion found in various other studies in the United States and United Kingdom that management and strategy matters in local government (Andrews et al. 2005; Andrews et al. 2009a, 2009b; Meier et al. 2007; Pasha, Poister and Edwards 2015; Poister and Streib 2005). The above results are consistent with a view that strategic planning and management is a way of knowing that is perceived to be working for some practitioners. However, when the aggregated administrative data for production, efficiency and change in efficiency indexes are used as more objective measures for impacts, formal strategic planning seemed to have no impact, and strategic types sometimes have negative impacts, corroborating what Andrews et al. (2012) found in their analyses of the Welsh local authority services. These seemingly contradictory results warrant discussion and perhaps more empirical analyses.

One explanation for the seemingly lack of consistent impacts of strategy in this analysis is that Norwegian municipalities are multi-purpose organizations. They produce a variety of services, ranging from mandatory services such as kindergarten, primary education and home

care, to less-regulated services such as culture. The local authorities in Norway have had a relatively stable portfolio of services for many years. (A major municipal reorganization reform commenced in 2014, after the period of study for this analysis.) Therefore, the defender type may have been perceived as a useful adaption for many municipalities, even though neither of the strategic types seemed to have had any positive impacts on the administrative data for performance, at least as measured in this analysis. Both the subjective and objective impacts measures employed in this analysis have been aggregate, municipal-wide measures and may not have been valid for capturing the variety in strategic management practices and strategic content with related impacts at the service level. Therefore, further studies may analyse strategic management and strategy content at the service level or in single-purpose organizations rather than at the aggregate organization level (Walker 2013).

There may also be several other explanations for why there are positive perceived impacts of strategic planning and management and strategic types, and why – maybe with the exception of the reactor type and improvement in efficiency – no or even negative relationships when impacts were measured with administrative measures. First, internal stakeholders and perhaps especially senior officials are often more positive about their own organization's performance than external stakeholders. The public administrators answering the survey were internal stakeholders who may have judged the impacts partly as results of their own management efforts. Therefore, the positive subjective assessment may have been self-serving.

Second, strategic planning and management are more than 30 years old in the public sector, but may still be regarded as best practice and modern, even though there is a lack of consistent 'hard evidence' on its outcomes. With this background, the subjective impact assessments may have been based on implicit expected impacts more than experienced impacts.

Third, although the municipalities have a great deal of discretion in their strategic management, the Nordic context means that the formal strategic planning and the strategic types may have had little impact relative to stakeholder involvement. The Nordic model of governance is typically described as relying on a large public sector financed by relatively high taxes; close co-operation between the government, labour unions and trade organizations; and extensive democratic participation in industrial relations. This governance seems to be producing a great deal of innovation, sustainable economic growth, balanced public finances, and a high level of equality and social welfare. Participation and stakeholder involvement are highly valued in this egalitarian culture and may therefore be greatly utilized in Norwegian public management, even beyond its rational use.

There may also be explanations for why there are discrepancies between the subjective and objective outcome measures, without invalidating the merits of strategic planning as a way of knowing that also improves performance. First, the subjective assessments were to some degree assessment of the impacts of the strategic planning on the management processes and less assessments of material impacts on production and efficiency. Therefore, the subjective and objective impacts measures used in this analysis may partly have measured different aspects, mainly impacts on management processes and production results and efficiency, respectively.

Second, the different assessments stemming from using subjective impact and administrative performance measures may be explained by these assessments using different time frames. The subjective impact assessments may have assessed relatively short-term impacts. The production and efficiency indexes for 2013 may have measured performance too early (1–2 years after the survey in 2011–2012) for the strategic management to be able to influence the production and efficiency to any great extent. In fact, municipalities with low

production may initiate strategic planning in addition to mandatory planning and reposition their strategic types, a reverse causality to that modelled in the regression analysis.

Finally, the strategic planning and management may have served the decision-makers well as a way of knowing. As a 'way of doing', however, there may have been contextual factors in Norway that do not necessarily translate strategic knowledge directly to impacts at the organizational level. (At the institutional level strategic knowledge has been extensively utilized, for example in the establishment of a supreme audit institution, an independent central bank, and many public sector reforms including an ongoing reform since 2014 of local government structure.) One such factor is that top-management decision-making and strategy may have less impact on organizational performance in unitary and corporatist countries, such as the Nordic countries, where professional norms (and stakeholder involvement) may dominate practices and hence performance, relative to decision-making and strategies in countries where a fragmented and adversarial context demands stronger hierarchical management, such as in the USA (Meier et al. 2015). Another factor that may explain the low level of urgency for closing a strategic knowing–doing gap in Norway was that country's strong fiscal situation, at least until the plunge in petroleum prices in 2014. Unlike many other countries public finances and reforms in Norway were not severely affected by the international financial crisis and Great Recession of 2008. When the petroleum prices fell markedly in 2014, however, also public organizations in Norway were more exposed to the prospect of fiscal austerity and maybe also more active strategic management.

This analysis has certain limitations in the research design and data, such as obtaining predominantly single organizational responses, measuring strategic types with single-item indicators, and lacking measures for effectiveness. In addition, due to the design of the survey the regression analysis in this article only encompassed municipalities that both responded to the questions on formal strategic planning documents and stakeholder involvement in the strategic planning. Future studies should better represent the variety in strategic planning, including perhaps municipalities with more informal strategic planning. Despite these limitations, this article has provided new knowledge on strategic planning and management practices, strategy content, and stakeholder involvement and their relationships with different measures of impacts in a Nordic context.

The analysis has revealed the need for further research on several issues. First, there is a need to incorporate more independent variables and disaggregate strategic planning and management in order to analyse the separate effects of elements of strategic planning and management, particularly the use of strategic management tools. Second, there is a need to use more dependent variables, such as measuring effectiveness and long-term impacts. Third, there is a need for more studies from different contexts; for example, analysing the impacts of strategic management at the service level and in contexts with less public finance affluence than Norway had at the time of study.

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Table 1: The composition of the perceived impact of strategic planning and management index (N=143)

<i>Perceived impact</i>	<i>Mean</i>
Mission, goals and priorities	
Orienting the municipal to a genuine sense of mission	4.0
Focusing the municipal council's agenda on the important issues	3.9
Enhancing employees' focus on organizational goals	3.9
Defining clear programme priorities	3.8
External relations	
Maintaining public support	3.8
Communicating with citizen groups and other external stakeholders	3.6
Maintaining supportive intergovernmental relations	3.4
Management and decision-making	
Making sound decisions regarding programmes, systems, and resources	3.6
Targeting and utilizing programme evaluation tools	3.5
Maintaining a functional organizational structure	3.5
Implementing effective management systems	3.4
Employee supervision and development	
Empowering employees to make decisions and serve the public	3.7
Providing direction and control over employee's activities	3.7
Building a positive organization culture in the municipality	3.6
Improving employee cohesion and morale	3.4
Providing training and development opportunities for employees	3.4
Performance	
Maintaining the jurisdiction's overall financial condition	3.8
Delivering high-quality public services	3.7
Managing operations in an efficient manner	3.6

Note: Variables are measured from 'disagree strongly' to 'agree strongly' (coded from respectively 1 to 5).

Table 2: Factor analysis of perceived impacts of strategic planning (N=143)

	Components			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	<i>Managing operations</i>	<i>Managing goals</i>	<i>Managing people</i>	<i>Managing external relations</i>
Implementing effective management systems	.76			
Maintaining a functional organizational structure	.76			
Making sound decisions regarding programmes, systems, and resources	.70			
Defining clear programme priorities	.70			
Managing operations in an efficient manner	.66	.42		
Targeting and utilizing programme evaluation tools	.66			
Orienting the municipal to a genuine sense of mission		.75		
Focusing the municipal council's agenda on the important issues		.71		
Enhancing employees' focus on organizational goals		.68		
Maintaining the jurisdiction's overall financial condition		.63		
Maintaining public support		.63	.48	
Providing direction and control over employee's activities		.53		
Improving employee cohesion and morale			.73	
Providing training and development opportunities for employees			.69	
Building a positive organization culture in the municipality			.68	
Empowering employees to make decisions and serve the public			.52	
Delivering high-quality public services	.42	.45	.47	
Communicating with citizen groups and other external stakeholders				.72
Maintaining supportive intergovernmental relations				.69
Cronbach's alpha reliability	.90	.87	.85	.60

Notes: Principal component analysis. Varimax rotation with Kaiser normalization. Rotation converged in eight iterations. The four factors explained 67 per cent of total variance.

Table 3: Indicators and weights in sub-indexes and total production index 2013

<i>Sector/indicator</i>	<i>Weight</i>
Kindergarten	0.164
Adjusted in municipal and private kindergartens relative to needs-adjusted number of inhabitants	0.8
Ratio of employees with preschool teacher education	0.1
Square metres of playing and outdoor area per child in all kindergartens	0.1
Primary school	0.272
Primary school production points (adjusted)	0.754
Learning environment	0.188
Ratio inhabitants aged 6–9 years with place in municipal after school	0.029
Ratio of users in municipal after school with full-time place	0.029
Primary health-care	0.053
Number of hours per week of medics in relation to needs-adjusted number of inhabitants	0.434
Number of hours per week of physiotherapists in relation to needs-adjusted number of inhabitants	0.363
Number of health consultations for children and pregnancy check-ups in relation to needs-adjusted number of inhabitants	0.203
Home care and home nursing care	0.361
Users of home care in relation to needs-adjusted number of inhabitants	0.431
Residents in institutions in total in relation to needs-adjusted number of inhabitants	0.369
Ratio of single room places in institutions	0.092
Ratio of users with at least two home care services	0.108
Child care	0.041
Children with child care examination in relation to needs-adjusted number of inhabitants	0.260
Children aged 0–17 with actions in relation to needs-adjusted number of inhabitants	0.540
Ratio of employees with vocational training	0.200
Social services	0.061
Ratio of users of economic social aid in relation to needs-adjusted number of inhabitants	0.461
Average social aid payment per month	0.461
Net expenses to qualifying scheme in relation to needs-adjusted number of inhabitants	0.078
Culture services	0.048
Book inventory in libraries per capita	0.252
Book lending per capita	0.252
Number of cinema shows per capita	0.051
Cinema visits per capita	0.051
Aid to children and youth activities per inhabitant aged 6–16 year	0.394

Source: Committee for Technical Calculation of the Municipal and County Finances 2014.

Table 4: The composition of the strategic planning and management index

<i>Strategic management element</i>	<i>Mean</i>
Strategic planning (N=176)	
One or more strategic planning documents	0.39
Initiated a strategic planning document	0.18
No strategic planning documents	0.43
Allocating resources and budgeting (N=100)	
The annual budget clearly reflects the objectives and priorities established in the strategic plan	3.8
New money in the budget is used to pursue the municipal strategic goals	3.6
Performance data tied to strategic goals and objectives play an important role in determining resource allocations	3.3
The strategic plan has a strong influence on the budget requests submitted by department heads and other managers	3.3
Performance assessments (N=100)	
The city council holds the chief administrative officer responsible for implementing the strategic plan	3.9
Objectives established for department heads and other managers come from the overall strategic plan	3.7
Annual evaluations of department heads and other managers are based largely on their accomplishment of strategic goals and objectives	3.3
Performance measurement and evaluation (N=100)	
Tracks performance data over time to determine whether the municipal performance improves	3.8
Benchmarks performance measures against other municipalities to gauge the effectiveness of strategic initiatives	3.7
Reports performance measures associated with the strategic plan to the municipal council on a regular basis	3.6
Use performance measures to track outcome conditions targeted by the strategic plan	3.4
Uses performance measures to track the content of the strategic plan	3.3
Targets programmes for more intensive evaluation based on goals and objectives of the strategic plan	3.3
Reports performance measures associated with the strategic plan to the public on a regular basis	2.8

Note: All variables except for strategic planning are measured from 'disagree strongly' to 'agree strongly' (coded from respectively 1 to 5).

Table 5: Strategic types (N=143)

<i>Question</i>	<i>Mean</i>
Focusing on core business areas is a major part of our approach (defender)	4.0
The municipality is at the forefront of innovative approaches (prospector)	3.3
Pressure from external actors is determining the development in our municipality (reactor)	3.0

Note: Variables are measured from 'disagree strongly' to 'agree strongly' (coded from 1 to 5).

Table 6: Involvement of stakeholders in strategic planning (N=100)

<i>Question</i>	<i>Mean</i>
The chief administrative officer has been centrally involved in the development of our strategic plan	4.3
Other municipal managers have been centrally involved in the development of our strategic plan	4.2
The municipal council has been centrally involved in the development of our strategic plan	3.7
The mayor has been centrally involved in the development of our strategic plan	3.5
Lower-level employees have been centrally involved in the development of our strategic plan	3.5
Citizens and other external stakeholders have been centrally involved in the development of our strategic plan	3.3

Note: Variables are measured from 'disagree strongly' to 'agree strongly' (coded from 1 to 5).

Table 7: Analysis of non-response

	Population				Sample			
	<i>N</i>	<i>Mean</i> (<i>st.dev</i>)	<i>Min</i>	<i>Max</i>	<i>N</i>	<i>Mean</i> (<i>st.dev</i>)	<i>Min</i>	<i>Max</i>
Production index 2013	367	103.8 (8.57)	86.6	144.2	153	103.0 (8.42)	88.2	144.2
Efficiency score 2013	378	.74 (0.998)	.50	1.00	158	.76 (.10)	.55	1.00
Change in efficiency score 2010–2013	355	.02 (.075)	-.24	.35	149	.03 (.068)	-.11	.30
Socialist municipal council representatives 2007–2011	429	.35 (.148)	.00	.81	175	.34 (.148)	.00	.68
Party concentration 2007– 2011 Herfindahl index	429	.27 (.110)	.14	1.00	175	.26 (.095)	.15	1.00
Average annual change in population 2009–2011	430	.006 (.0112)	-.054	.050	176	.006 (.0113)	-.054	.050
Ethnic diversity 2011	430	.143 (.0536)	.019	.399	176	.140 (.0527)	.025	.316
Average annual net operating margin 2008–2010	429	1.9 (3.37)	-6.9	25.1	176	1.9 (3.43)	-4.8	25.1
Municipal population 1.1.2011	430	11442 (34745.8)	216	599230	176	14297 (29020.4)	216	260392

Source: Committee for the Technical Calculation of Municipal and County Finances, and Statistics Norway.

Table 8: Descriptive statistics

	N	Mean	SD	Min	Max	Alpha
<i>Dependent variables</i>						
1 Perceived overall impact index	143	3.65	0.5	1.95	4.79	.94
2 Perceived managing operations index	143	3.55	0.61	1.83	5	.90
3 Perceived managing goals index	143	3.86	0.55	1.67	5	.87
4 Perceived managing people index	143	3.57	0.55	1.6	5	.85
5 Perceived managing external relations index	143	3.49	0.59	1.5	5	.60
6 Production index 2013	124	103.04	8.48	88.2	144.2	
7 Efficiency score (DEA) 2013	128	0.75	0.1	0.55	1	
8 Change in efficiency score (DEA) 2010–2013	120	0.02	0.07	-0.11	0.27	
<i>Independent variables</i>						
9 Strategic planning and management index	143	49.9	7.95	23	67	
10 Defender	143	4	0.65	2	5	
11 Prospector	143	3.3	0.78	1	5	
12 Reactor	143	3	0.79	2	5	
13 Stakeholder involvement index	100	3.8	0.52	2.7	5	.63
<i>Control variables</i>						
14 Percentage socialist municipal council representatives 2007–2011	142	0.35	0.142	0	0.68	
15 Party concentration 2007 Herfindahl index	142	0.26	0.098	0.15	1	
16 Average percentage annual change in municipal population 2009–2011	143	0.006	0.0118	-0.054	0.05	
17 Ethnic diversity 2011 Herfindahl index	143	0.139	0.0514	0.041	0.3	
18 Average percentage annual net operating margin 2008–2010	143	1.9	3.62	-4.8	25.1	
19 Municipal population 1.1.2011	143	13535	23442.4	216	173486	

Table 9: Correlation analysis (N=[85–143])

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Perceived overall impact index																		
2 Perceived managing operations index	.91**																	
3 Perceived managing goals index	.90**	.73**																
4 Perceived managing people index	.89**	.74**	.72**															
5 Perceived managing external relations index	.63**	.47**	.50**	.52**														
6 Production index 2013	-.01	-.02	-.06	.02	.08													
7 Efficiency score (DEA) 2013	.08	.08	.09	.05	.00	-.44**												
8 Change in efficiency score (DEA) 2010–2013	-.07	-.04	-.11	-.07	.00	-.09	.31**											
9 Strategic planning and management index	.66**	.62**	.61**	.57**	.35**	-.16	.24**	-.07										
10 Defender	.33**	.27**	.40**	.20*	.24**	-.18*	.04	-.01	.31**									
11 Prospector	.42**	.44**	.34**	.36**	.26**	-.23**	.05	-.09	.50**	.08								
12 Reactor	-.12	-.09	-.12	-.14	-.05	-.18*	.12	.09	-.07	.06	-.08							
13 Stakeholder involvement index	.46**	.38**	.37**	.44**	.48**	.10	-.07	-.12	.40**	.26**	.35**	-.07						
14 Percentage socialist municipal council representatives 2007–2011	-.04	-.04	.00	-.07	-.04	.02	-.01	.01	.07	-.03	-.07	.07	-.02					
15 Party concentration 2007 Herfindahl index	-.11	-.15	-.11	-.03	-.06	.24**	-.12	.08	-.14	-.03	-.18*	.08	-.07	.10				
16 Average percentage annual change in municipal population 2009–2011	.06	.06	.06	.04	.02	-.37**	.46**	.03	.18*	.02	.24**	.09	.13	-.22**	-.40**			
17 Ethnic diversity 2011 Herfindahl index	.08	.11	.10	.01	-.02	-.14	.38**	-.06	.19*	-.03	.17*	.09	.13	-.18*	-.27**	.40**		
18 Average percentage annual net operating margin 2008–2010	.06	.03	.06	.06	.12	.23**	-.27**	-.11	.15	.11	.03	.08	.26*	-.08	.21*	-.01	-.01	
19 Municipal population 1.1.2011	.12	.14	.14	.03	.04	-.27**	.58**	.00	.24**	.02	.19*	.07	.06	.06	-.18*	.29**	.53**	-.12

Notes: ** = Correlation is significant at the .01 level (2-tailed). * = Correlation is significant at the .05 level (2-tailed).

Table 10: Multiple regression of strategic planning and management impacts

	<i>Perceived overall impact index (N=99)</i>	<i>Perceived managing operations impact index (N=99)</i>	<i>Perceived managing goals impact index (N=99)</i>	<i>Perceived managing people impact index (N=99)</i>	<i>Perceived managing external relations impact index (N=99)</i>	<i>Production index 2013 (N=87)</i>	<i>Efficiency total score 2013 (N=90)</i>	<i>Change in efficiency total score 2010–2013 (N=84)</i>
Constant	.450	-.504	-.552	.371	2.203**	114.706**	.918**	.037
Strategic planning and management index	.813**	.046**	.045**	.042**	.014+	-.055	5.875E-5	-.001
Defender	6.175**	.364*	.444**	.189	.047	-2.684+	-.040	.004
Prospector	.682	.070	.048	.058	-.117	-2.227+	-.016	-.009
Reactor	-1.822+	-.090	-.072	-.119*	-.091	-1.803+	.009	.018*
Stakeholder involvement index	2.895	.166	.172	.162	.360*	3.129+	-.022	.007
Socialist municipal council representatives 2007–2011	-11.692*	-.743**	-.329	-.791*	-.834*	-6.141	.066	-.062
Party concentration 2007–2011 Herfindahl index	11.201	.322	.073	1.429*	.984	15.145	.066	.092
Average percentage annual change in population 2009–2011	-59.198	-2.757	-5.984	-2.276	1.159	-125.394	2.455**	-.319
Ethnic diversity 2011 Herfindahl index	5.459	.550	.605	.263	-1.385	19.902	-.012	-.148
Average percentage annual net operating margin 2008–2010	-.274	-.018	-.007	-.020	-.016	.457+	-.008**	-.003+
Municipal population 1.1.2011 (1,000 inhabitants)	-.006	.000	.000	-.002	.001	-.062+	.002**	.000
Prospector X Stakeholder involvement index	2.865			.245+	.239			
Defender X Strategic planning and management index	-.319*	-.015	-.020*	-.015+			.004*	
Adjusted R2	.47	.41	.36	.41	.27	.21	.52	.02
Change in R2 from baseline model without interaction effects	.018	.009	.023	.020	.014	–	.025	–
F-value	7.61**	6.67**	5.52**	6.31**	4.02**	3.11**	9.03**	1.14
Highest variance inflation index (VIF)	7.03	6.54	6.54	7.03	2.37	1.87	6.60	1.90

Notes: ** = Significant at the 0.01 level (2-tailed). * = Significant at the 0.05 level (2-tailed). + = Significant at the 0.10 level (2-tailed).

Figure 1: Conceptual framework

