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INOPS Technical Report

A study of contracting out of park and road maintenance in Denmark, Sweden, Norway and United Kingdom

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TECHNICAL REPORT

Innovationer i det offentlige-private samspil (INOPS)

(Innovations in the organization of public-private relations)

A study of contracting out of park and road maintenance in Denmark,
Sweden, Norway and United Kingdom

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January 2017

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1 FOREWORD

Andrej Christian Lindholst

Public sector reforms have pushed for an increased use of competition and involvement of private contractors in the delivery of park and road maintenance services since the 1980s. The type, strength, path and outcomes of reform have varied immensely among countries. This research report adds to our knowledge on reform and change in the public sector by exploring in further detail the trajectories of the push for reform within the park and road sectors in Denmark, Sweden, Norway and the UK.

The research report is a key output from the ‘INOPS’ research project *‘Innovations in the organization of public-private relations.’*¹ The research project was prepared in 2013 by DDH Contractors A/S and Department of Political Science, Aalborg University. The formulation of the INOPS research project was partly initiated as a continuation of research carried out in 2012 and 2013 in a smaller research project focusing on quality effects from contracting out led by the Swedish Agricultural University, Sweden and financed by Hedeselskabet, Strategy and Innovation, Denmark. Hedeselskabet, Strategy and Innovation, Denmark and Aalborg University, Denmark have co-financed the INOPS research project.

From a business perspective, contracting out of public services represents new market opportunities, but also new challenges related to investment in and development of well-performing business models and service concepts. Likewise, from a managerial perspective it is also important to gain insight on different paths for development of contracting out as well as how contracting out can be organized in ways supportive to policy objectives. Ensuring a continuous ‘fit’ between private contractors’ capabilities, available ‘service concepts’ and the ways public authorities engage private contractors in their service delivery systems is key for producing outcomes of ‘public value’. Present challenges for aligning the ‘fit’ in ways that produce outcomes of public value are multiple and complex. An incomplete list of challenges relates financial constraints, cuts in, and prioritization of public budgets, continued pressures for increasing the overall efficiency of service delivery systems, intensification and changes in legal and regulatory frameworks, changing political

¹ The original Danish title of the research project is: *‘Innovationer i organiseringen af det offentlige-private samspil i et internationalt perspektiv med fokus på kommunaltekniske driftsopgaver’* with the abbreviated title *‘innovationer i det offentlige private samspil’*. The Danish acronym for the title is: ‘INOPS’.

objectives and mix in policy instruments, life-style changes and demographic developments as well as enlarged and complex planning needs to forecast and deal with the consequences of changes in the use of and demand for 'green' recreational, ecological and social resources as well as transport infrastructure in urban zones.

From a research perspective, contracting out of public services is a well-known theme. Contracting out has commonly been perceived as a standard policy instrument with somehow stable characteristics and framed by research questions related to evaluation of its outcomes and differences in its adoption. Research, however, which includes park and/or road maintenance have been less frequent over the years. Insights based on comparisons across several countries as well as differences in contractual frameworks are also rare.

On the backdrop of the preparation and interests outlined above, the research project was given the objectives to address, in an international perspective, current variations in the organization of, purposes for and outcomes from contracting out as well as come up with advice for how contracting out within the park and road sector can be improved. The research has relied on a variety of data sources in terms of primary and secondary data sources. The research has in particular relied on primary data from national surveys as well as case-studies carried out in Denmark, Sweden, Norway and the UK.

The research project was commenced 1st, January, 2014 and carried out in collaborations with researchers from Denmark, Norway, Sweden and England. INOPS was led by Andrej Christian Lindholst (main author) and Morten Balle Hansen, Aalborg University. The main author is sole responsible for all conclusions and analyses presented in the technical report and the project summary (in Danish). Partners in all countries have contributed to various parts of the project. Partners in Sweden were Ylva Norén Bretzner and Johanna Selin, School of Public Administration, Gothenburg as well as Bengt Persson and Thomas Barfoed Randrup, Swedish Agricultural University, Alnarp. The partners in Norway were Merethe Dotterud Leiren, Norwegian Centre for Transport Research and Ingjerd Solfeld, Norwegian University of Life Sciences. Partners in England were Mel Burton and Nicola Dempsey, University of Sheffield and Peter Neal, Peter Neal Consulting Ltd. Partners in Denmark were Ole Helby Petersen, Roskilde University and Kurt Houlberg, KORA. In addition, several student assistants have assisted the project. The project has been co-financed by Hedeselskabet Strategi & Innovation and Aalborg University. Hedeselskabet Strategi & Innovation has been represented by Lisbeth Sevel.

Without the contributions from a long list of people and organizations it would not have been possible to carry out the various research tasks in INOPS. The partners in INOPS especially thank all employees in park and road departments in Denmark, Sweden, Norway and the UK that devoted some of their time to answer our survey and contribute with information for a series of case-studies. The partners would also thank colleagues who provided feedback and ideas for the research.

2 INTRODUCTION TO THE PROJECT

2.1 Relevance and policy context

The use of competition and private contractors in service delivery systems through the means of public procurement and contracting out has been on the reform agenda in the Danish public sector as well as in other OECD countries since the 1980s and until present day. The reform agenda has over the years resulted in substantial changes in service delivery systems within virtually all public service sectors as well as municipal park and road management.

In a Danish context, the political and administrative objective of contracting out has historically been articulated through the oxymoron '*best and cheapest*'. The oxymoron reflects policy-makers' long-standing interest in adopting contracting out as a way of improving technical efficiency, in particular by reducing costs, in service delivery systems in the public sector. However, today objectives may be different or at least more multi-dimensional. Ideas related to 'partnerships' and 'collaboration' has been introduced since the 2000s in a Danish context as well as earlier in early marketization countries such as the UK, Australia, New Zealand or USA. These ideas can be said to relate to a broader interest in 'allocative efficiency' in contrast to the earlier interest in 'technical efficiency'. Efficiency may now not only be about reducing costs per unit of service provided, but also about providing services in ways espoused and valued by local communities as well as among responsible public authorities and service providers across the public and private sectors.

2.1.1 *Contracting out as innovation in the public sector*

Contracting out, where private companies, through law-regulated procedures for procurement, are delegated temporary responsibilities for providing various services in the public sector, can be regarded as an innovation in the public sector on the same level as other recent reform elements such as performance management or user choice.² Successful public sector innovations include phases of developing, testing, utilization and dissemination of new ideas within an organisation or organisational field. Seen in the light of the increasing use of public procurement and contracting

² Hansen, Morten Balle, 2013, Transnational organisatorisk innovation i den offentlige sektor, *Politica* (45)3: 267–286.

out in the Danish municipalities since the beginning of the 1990s, it can be argued that public procurement and contracting out have been relatively successful innovations.³ However, the ongoing political declarations, objectives and agreements regarding increased usage of contracting out on the municipal level continue to spur explorations of the innovative potential of contracting out.

Historically, contracting out has contributed to organisational change and development with respect to the opportunities offered by a ‘standard’ – or ‘conventional’ – approach characterized by standardization of services, a strategic focus on cost minimizing, arm-length managerial relations and the use of competitive markets. Today, it is also possible to ask whether and how a number of new ideas, approaches and forms for organizing contracting out can create new changes and directions for the development and reform of the public sector. In an organisational perspective, the difference in approach can be framed as a difference between ‘competitive’ strategies and ‘cooperative’ strategies to engagement in and utilization of inter-organizational relations.

2.1.2 Scandinavia and the UK

The primary context of the research is the three Scandinavian countries: Denmark, Sweden and Norway and the UK. The Scandinavian countries shares some characteristics such as a large public sector, a strongly decentralised welfare state dominated by principles of universalism, being highly developed and rich countries with open economics depending on exchange with other countries, a shared cultural outlook, as well as being relatively small countries internationally in terms of inhabitants. The Scandinavian countries also differ in important respects, such as administrative structure and geography. Since the 1980s the public sectors in the Scandinavian countries have experienced national versions of reforms based on principles and doctrines associates with new public management as well as newer reform trends based on the new public governance paradigm.

The UK has long been regarded as a ‘benchmark country’ for the study of marketization and new public management types of public reforms (Barzelay, 2001). Reform ideas have emerged and been implemented early in the UK, the width and depth of reforms has been profound and the approach to implementation has been more radical and swift than in the three Scandinavian countries.

From a research point of view, it is interesting to compare how the same basic reform ideas and models for marketization have fared and shaped the public sector and service delivery systems

³ For 1993, 2006 and 2011, the private supplier indicator (PLI, 2012 definition) has been calculated as, respectively, 16.3%, 19.5% and 24.9%. In the years 1993–2005, the average annual rate of increase is 1.4%. In the years 2006–11, the annual rate of increase is 4.6%. Source: www.noegletal.dk.

in the three countries as well as benchmarking Scandinavian with the UK. Do the three countries converge or diverge in comparison with the UK? Have the countries in Scandinavia ‘catch up’ with the UK? Are they following a similar route in the marketization of the public sector? What are the comparative outcomes between the four countries?

2.1.3 The park and road sectors

Responsibilities for park and road services are often found organized within the same or neighbouring departments in the technical administration with a mid-level manager (within the overall municipal hierarchy) as responsible for both types of services. Still, the, the two services differ substantial in their content (e.g. serving recreational versus transport needs), are not regulated by the same administrative and legal frameworks and the technical expertise as well as professional identity differs between the two sectors.

From a theoretical point of view, some research finds that the two sectors exhibit relatively conducive characteristics for contracting out and public procurement. Services related to maintenance of parks and green spaces as well as maintenance of roads and streets have been regarded as a ‘low transaction cost services’ which are characterized as relatively easy to specify and monitor as well as demanding a relatively low degree of specialized investment.

Indeed, park and road maintenance services have along with other services organized within technical departments in local governments been at the forefront in the implementation of public reforms in many countries. In particular, the introduction of contracting out and public procurement as well as the import of business-like principles for the organization of in-house provision (e.g. business plans and financial autonomy) has been at the agenda for years in the two sectors. However, professionals in Scandinavia often regard Sweden as a ‘forerunner’ in Scandinavia, Denmark as second while Norway is a latecomer in the implementation. The UK is still regarded as a true ‘forerunner’ in innovation of the tools of marketization compared to Scandinavia as well as a source for inspiration and learning.

2.2 Research aim and key questions

This technical report contains background analysis and findings from the INOPS research project. The purpose of the INOPS project was, from an international perspective, to describe, analyse and recommend different forms of contracting out and public–private co-operations within the technical area in municipalities, including a focus on innovation and how to involve contractors ‘optimally’. The INOPS project should investigate the background for and implementation of various forms of contracting out and public–private co-operation based on experiences with contracting out in the roads and parks area in Denmark, Sweden, Norway and England.

The research report addresses three key research questions in a comparative perspective:

1. *Why* are park and road maintenance services contracted out?
2. *How* are park and road maintenance services contracted out?
3. *What* are the outcomes from contracting out park and road maintenance?

The first research question focuses on the purposes – or strategic intends – for contracting out. The scope of the research question is broader than the conventional cost perspective. The cost concern are pervasive in the political and administrative discourse on contracting out as well in many studies of contracting outcomes, but strategic intends in local governments might differ from the ruling discourse. The purposes of cooperative strategies to contracting out, for example, differ from competitive strategies. The second research question is about the variations in how contracting out is organized and managed. The introduction of cooperative strategies for contracting out in terms of ‘partnerships’ or ‘partnering’ as well as other innovations such as long term performance-based contracting have expanded the options for local governments. The third research question is about the outcomes form contracting out in terms of the conventional evaluation of cost effects as well as a more multi-dimensional evaluation of the performance of private contractors. By addressing the three key research questions it is also possible to address how far innovative models of contracting out has been implemented as well as whether some approaches to contracting out performs better than others for the provision of park and road maintenance services.

2.3 Methods

The INOPS project included a number of different methods for data collection and analysis as well as involved a network of researchers within and across Denmark, Sweden, Norway and England. The INOPS project is based on a ‘mixed method’ research design where data collection has encompassed both quantitative and qualitative kinds. The quantitative parts of the data collection were carried out before the qualitative data collection. The appendices include detailed descriptions of the collection of both quantitative (survey) and qualitative (cases) data.

2.3.1 *Quantitative parts*

Design of the quantitative data collection was driven by theory as well as a priori insights on service delivery within the municipal park and road sectors. The survey instrument, which was used for collection of quantitative data, was designed to allow for comparisons across all four national contexts but a degree of adaption of survey designs to the national contexts was required in all countries. The national surveys were carried out electronically in all four countries with the total population of local authorities with responsibilities for park and road management as the sample frame. Some analyses also integrate register based data on municipal spending and contracting levels as well as demographics. Register based data was sourced from national statistic bureaus. The quantitative data has been used for both descriptive and inferential analytical purposes. The analysis of quantitative data material provides, with some reservations, general overviews (by statistical generalization) over current status and trends in the organisation and use of contracting out. By inferential analysis the quantitative data materials also, to some extent, allows for nomothetic assessment of causal mechanisms. The cross sectorial nature of the survey based data do not allow for the same degree of scientific control as found in longitudinal or experimental research designs. However, cross sectorial survey data is a common and widely used for assessment of causal mechanisms in social sciences.

2.3.2 *Qualitative parts*

The qualitative data collection was initially guided by findings from analysis of quantitative data. The qualitative data collection and analysis has been employed to explore in greater detail the more parsimonious findings in the quantitative analysis. Qualitative data was collected through a range of case studies in each country. The case-studies have in particular investigated ‘innovations’ in municipal service delivery systems in each national context where private contractors were

involved. The case studies are organised as rich accounts and each case in particular provides an opportunity for ‘naturalistic’ generalizations as well as generalizations based on comparative case analysis. The case studies also allows for idiosyncratic assessments of causal mechanisms in individual cases (e.g. why has a *particular* contracting outcome occurred for a *particular* municipality).

2.3.3 *International collaboration*

Also, as part of the project’s methods, collaborations were established with researchers from Denmark, Norway, Sweden and the UK. Collaborations were a requirement for designing and carry out surveys in national languages as well as analysing and interpreting data and findings. Involvement of more researchers in a project can furthermore be seen as a method for triangulation in analysis and overall improvement of validity of the research.

2.3.4 *Scientific products*

An explicit aim at the point of departure of the research project was to deliver research of high international standards with publications in academic national and international journals. The aim was important as it is congruent with the aim of delivering valid and unbiased insights based on sound research methods. The research and the data it has provided have until June 2016 resulted in publications of seven titles in academic journals and series:

- *Marketization trajectories in the Danish road and park sectors: A story of incremental institutional change.* Lindholst, Andrej Christian, Hansen, Morten Balle & Petersen, Ole Helby (2016). International Journal of Public Sector Management, vol. 29, issue 5.
- *Marketization Revisited.* Hansen, Morten Balle & Lindholst, Andrej Christian (2016). International Journal of Public Sector Management, vol. 29, issue 5.
- *Capability versus efficiency: Contracting out park and road services in Norway.* Leiren, Merethe, Dotterud, Lindholst, Andrej Christian, Randrup, Thomas Barfoed & Solfjed, Ingjerd (2016). International Journal of Public Sector Management, vol. 29, issue 5.
- *Contracting Out Parks and Roads Maintenance in England.* Dempsey, Nicola, Burton, Mel & Selin, Johanna (2016). International Journal of Public Sector Management, vol. 29, issue 5.
- *Is public procurement efficiency conditioned by market types? A critical test in park and road sectors in Sweden.* Bretzer, Ylva Norén, Persson, Bengt & Randrup, Thomas Barfoed (2016). International Journal of Public Sector Management, vol. 29, issue 5.
- *Samarbejdets betydning i den 'klassiske udlicitering': En analyse af de transaktionelle og relationelle dimensioners betydning.* Lindholst, Andrej Christian (2015). Politica, årgang 47, nummer 4, 522-540.

- *Hvordan fungerer udlicitering bedst?* Lindholm, Andrej Christian. Bogkapitel (12) i Politologisk Årbog 2015/16. Sider 52-55. København: Hans Reitzels forlag.

The range of articles provide detailed insights and various analyses based on INOPS data on contracting within each of the four countries as well as more general insights on contracting out. The data and analysis in the INOPS project and the international collaborations it has spurred are expected to result in several additional publications in the years to come.

2.4 Reading guide to the technical report

The technical report is organized in a series of chapters which provide partial analyses of the key questions. Insights from the various analyses contained in the different chapters are used as basis for a final discussion and drawing up conclusions. The executive summary (in Danish) sums up the findings related to purposes (why), variations (how), outcomes (what) and forwards recommendations for development of contracting out in Denmark.

Each chapter is organized in a similar format. The first sections in a chapter put forward a range of research questions which is subsequently addressed within the chapter. Findings in each chapter are presented immediately after the research questions. All analyses, which sustain findings, are provided in the last (and lengthy) sections of a chapter. Each chapter also provides a range of figures and tables where data and analysis are presented.

3 EARLIER RESEARCH ON CONTRACTING OUTCOMES

This chapter provides an overview on earlier research on outcomes from contracting out park and green space maintenance services and road maintenance services. The chapter is based on a literature search. For parks, findings from altogether 10 studies are presented and discussed. For roads, one study is presented and discussed.

3.1 Park maintenance: Ten studies

Altogether 12 studies which report findings on outcomes from contracting out park maintenance services were identified in an extensive literature review. Two of the 12 studies were excluded from further review due to methodological issues. Table 1 provides a chronological overview of remaining 10 studies which were found methodological adequate and reports on outcomes from contracting out park and green spaces maintenance services.⁴

3.1.1 *Comparison of studies from the park sector*

The 10 studies cover the timespan of almost three decades (1988-2015). With a few exceptions, the studies tend to focus on only one or two key outcomes. Economic outcomes in terms of cost savings and/or technical efficiency are the most reported outcome. Explanations for outcomes are not systematically addressed across the studies, but together the 10 studies provide a list of potential explanations for the various outcomes. The evidence is mainly based on quantitative data which is analysed with various statistical methods or reported descriptively. Altogether 7 studies report statistics as part of their key findings while 3 studies report findings in terms of qualitative accounts. 4 studies are purely quantitative in terms of data, 2 studies are purely qualitative in terms of data while 4 studies are based on a mix of quantitative and qualitative data. The literature represents studies from a very limited number of countries. USA (3 studies), England and Wales (4 studies), and Denmark (3 studies) are the only represented countries.

⁴ See end of chapter for more details on the methods for the literature review.

Table 1.
Chronological overview on studies on outcomes from contracting out maintenance services in parks and green spaces.

Source	Reported outcomes	Reported explanatory factors	Evidence base	Country context
Berenyi & Stevens (1988)	Improved technical efficiency (approx. 37%)	Less labor intensive organization More direct control with manpower and use of technical equipment Different characteristics of employees and employment	Analysis based on quantitative data on the comparable efficiency and effectiveness of street tree maintenance in 20 cities between public and private service provisions. Results are significant at the .90 percent level.	USA
Martin & Stein (1992)	Insignificant relationship between contracting out and overall spending on operations.	Theoretical considerations about government need to reduce costs and number of public employees.	Cross-comparison of overall cost levels and service provisions in 877 local authorities	USA
Walsh & Davis (1993)	Cost saving (average 10%) and some improvements in technical efficiency	Increases in productivity and changes (higher or lower) in work standards.	Includes analysis of quantitative survey-data for eight services, including 69 grounds maintenance contracts from 40 local authorities.	England and Wales
Patterson & Pinch (1995)	Estimated average reductions in staff about 32% for private and 13% for public providers. Organizational change toward 'strategic centralization' and 'operational decentralization'	Legislative requirements. Cost-focused contracting policies	Narrative account based on secondary data (statistics)	England and Wales
Clark (1997)	Improved technical efficiency and improved monitoring reported in a majority of local governments (no estimates for effect size provided).	Not discussed.	Analysis of survey data based on 268 responses (response rate 53%) from local governments in England and Wales.	England and Wales
Jones (2000)	Improved information level on assets, costs and service levels. Reduced production costs. Decreased standards and quality of services. Loss of staff engagement and motivation. Loss of skills and local knowledge.	For cost savings: Tight and cost-focused contracting policies	Longitudinal study (retrospective) based on qualitative data in four city councils.	England
Jang (2006)	No change in overall expenditures on services from contracting out to profit-seeking firms, but lower expenditure on services in municipalities contracting out to non-profit or other public providers.	For negative effects: Transactional risks (difficulties with service measurability and monitoring). For positive effects: Economy of scale, sufficient competition.	Combined statistical analysis of register and survey data (from 1997).	USA
Lindholst (2008)	Improved technical efficiency (34%) Improved managerial effectiveness	Former in-efficient in-house organization. Stronger management instruments ('high powered incentives')	Embedded case study of one contracting authority based on quantitative and qualitative data on six grounds maintenance contracts.	Denmark
Nuppenau (2009)	Decentralization of operational decision-making and responsibilities. Differential staff experiences (adapting to contract management as both difficult and stimulating). Creation of common goals and common spirit / cultural change. Improved technical efficiency.	Marketization as a locally driven organizational change process. Competitive pressures.	Case study of six municipalities with different characteristics (size and geographical location).	Denmark
Lindholst et al. (2015)	Improved technical efficiency Decreased allocative efficiency	Limited managerial focus on functionality. Limited outlook in contract management practices and 'mind-sets'	Case-study based on analysis of existing literature.	Denmark

All studies identified by inspection of reviews of contracting out, reference lists and literature searches.

The studies which measure cost change at the level of individual contracts (Berenyi & Stevens, 1988; Walsh & Davis, 1993; Clark, 1997; Lindholst et al., 2015) all find that cost savings has been a result when services are contracted out. The studies which measures cost change at the level of overall budget / spending levels and provide analysis based on statistical analysis of quantitative

data (Martin & Stein, 1992; Jang, 2006) do not find any relationship between contracting levels and spending levels. Studies which report on change in overall spending levels based on qualitative data or narratives (Jones, 2000; Lindholst, 2008; Nuppenau, 2009). Regarding effects on service levels and quality some studies (Jones, 2000; Lindholst et al., 2015) found or report about negative effects while other studies (Lindholst, 2008; Berenyi & Stevens, 1988; Walsh and Davis, 1993; Clark, 1997) found no negative effects. Studies which consider effects on both quality and cost levels (Berenyi & Stevens, 1988; Walsh and Davis, 1993; Clark, 1997; Jones, 2000; Lindholst, 2008) all find that *technical* efficiency improves (e.g. improved productivity). However, two studies (Jones, 2000, Lindholst et al. 2015) indicate problems with the *allocative* efficiency (e.g. satisfaction of user needs). Some studies also report on different managerial, organisational and staff effects (Nuppenau, 2009; Patterson & Pinch, 1995; Clark, 1997, Lindholst, 2008, Lindholst et al, 2015). On the balance, the effects for staff are predominantly negative while the effects for management are predominantly positive.

In sum, the review finds supportive evidence for an assumption that contracting out in contrasts to in-house provision reduces operational costs for maintenance services. However, no evidence is found in support for the assumption that contracting out should also reduce overall spending levels within the overall service delivery systems. The evidence furthermore suggests that technical efficiency is improved while some long-term problems with allocative efficiency may arise. The evidence also indicates that substantial changes are involved for management, organisation and staff. In particular the number of operational staff are reduced, some aspects of management is improved (e.g. ‘effectiveness’) while new organisational principles are introduced (e.g. ‘strategic centralization’ and ‘operational decentralization’).

The findings need to be generalized only with careful reservations. Findings may, for example, equally be a result from contextual particularities or methodological limitations (e.g. confounding factors or ‘lurky’ variables). Contextual particularities may include policy context, market structure or administrative structure.

3.1.2 Parks: resumes of individual studies

The following section provide presentations and short discussions of altogether 12 studies which report findings on outcomes from contracting out park and green spaces maintenance services. 10 studies are found methodologically sound while 2 studies are found problematic due to methodological issues.

Berenyi & Stevens (1988)

The study by Berenyi & Stevens (1988) compares the cost and quality of public versus private service delivery across eight municipal services in 20 cities in the metropolitan area of Los Angeles, US. The study includes street tree maintenance which for the purpose of this review can be regarded as a typical part of grounds maintenance.

Data for the analysis included measurement of actual cost for street tree maintenance, measurement of quality by trained arborist (by rating the quality of pruning cuts, general health of trees and safety procedures), service scale (measured by the number of tree visits) and service levels (measured by the level of pruning and number of maintenance activities performed).

The study finds a statistically significant difference at 37 percent (at a 90-percent confidence level) in technical efficiency (by provision at the same service level/quality, but at a lower cost) between public and private provision of street tree maintenance. The study did not provide a direct causal analysis for explanation of the differences in technical costs and quality levels but provided evidence for statistical significant differences between public and private provision across all eight services. The differences included management and personnel practices as well as technology and its usage for some services. The main differences in personnel practices included lower levels of absenteeism, a younger workforce, lower level of fringe benefits, lower average age and tenure, easier access to hiring and firing, shorter distance between management and direct labor as well as a general lower level of labor costs among private contractors compared by municipal organizations.

Martin & Stein (1992)

The study by Martin & Stein (1992) compares the level of spending and level of government employment for altogether seven functional categories across contracting and non-contracting municipalities in the US (N=877).

For the category 'parks and recreation', an amalgamate of the functions 'parks' and 'recreational facilities', they find a statistically significant ($p > 05$) higher spending level for contracting municipalities compared to non-contracting municipalities. However, the spending level for parks and recreation in the main analysis includes costs for land acquisition and development. By omitting costs for 'land acquisition and development' and including only 'outlays for current operations' in the analysis, Martin & Stein (1992) find no significant statistical difference between contracting and non-contracting municipalities. Thus their main analysis basically indicates that

contracting municipalities has a higher level of spending on land acquisition and development than non-contracting municipalities. Regarding the number of employees, measured by full time equivalents (FTE), it comes as no surprise that contracting municipalities has a statistically significant lower FTE compared to non-contracting municipalities. The findings by Martin & Stein (1992) indicate that contracting out should have no effect on overall spending levels regarding parks and recreation. However, findings on spending levels are impeded to an unknown degree by the lack of control for differences in service levels between contracting and non-contracting municipalities as well as any change in service quality as a result of contracting out (or non-contracting).

For all functional categories in their analysis, Martin & Stein (1992) find that contracting out is significantly related to (slightly) lower levels of spending. However, lower spending from additional contracting is found insignificant after a city contracts for more than 25 percent of its services. This finding empirically echoes the theorem of ‘diminishing return to competition’ as, for example, discussed within the context of public service delivery by Boyne (Boyne, 1998a, pp. 182-3). The theorem states that introduction of additional levels of competition in a context already characterized by a degree of competition has increasingly lower effect on performance.

Walsh & Davis (1993)

The study by Walsh & Davis (1993) addresses various effects and changes resulting from the introduction of compulsory competitive tendering for altogether eight different technical services in Local Governments in England and Wales in the late 1980s and early 1990s. The study by Walsh & Davis (1993) relies on survey data collected from altogether 40 local authorities and included data on 69 grounds maintenance contracts.

Walsh & Davis (1993) find that the shift from provisions of grounds maintenance by direct services organizations (in-house) to contracting out had resulted in average cost reductions by a magnitude of 10.9 % (p. 143). An additional analysis of the data provided by Walsh & Davis (1993) shows that the standard deviation is around 15 %. An inspection of the provided data shows that costs increased for 13 contracts, costs remained stable for nine contracts and for 46 contracts costs had decreased. For the ten contracts reporting the largest cost reductions the range were reported to be between approximately 26 % and 50 %. For the ten contracts with the highest cost increase the range were reported to be between approximately 3 % and 19 %.

Walsh & Davis (1993) also report that local authorities find that specified services standards for grounds maintenance in general were attained by private contractors (p. 134). The main sources for cost reductions were for all services reported by local authorities to be due to increases in productivity and changes toward lower work standards while the main source of cost increases was reported to be changes toward higher service standards. (p. 147). On the whole, these data indicates that not only were cost savings achieved, but technical efficiency on the average also was improved in some (but unknown) degree.

Greene (1994)

The study by Greene (1994) addressed whether efficiency in service provisions were higher for six different services areas in cities with low levels of contracting compared to cities with high levels of contracting. Services within parks and recreation were included as one of the six service areas in the study. The comparison included a shortlist of altogether 12 cities in the US that were found to be alike regarding size and service levels but differing regarding the level of contracting. Cities with low levels of contracting had less than 10% of their services provided by private contractor whereas cities with high levels of contracting had more than 35% of their services provided by private contractors. For parks and recreation the service level was operationalized by a standard where the city maintained at least one tennis court per 5,000 residents (p.1322). Cities with high levels of contracting was found to spend 74.6 % less money per capita on parks and recreation compared to cities primary relying on municipal departments with public employees. Cities with high levels of contracting had furthermore 59.4% less employees within parks and recreation as well as a 74.7% lower payroll. The differences for money spend per capita and payrolls were both significant at the .05 level.

The credibility as well as the generalizability of the findings in the study by Greene should be severely questioned. Firstly, the low N (=12) in the sample is problematic for a pure statistical analysis. Secondly, the sampling strategy is problematic for the generalizability of the findings. Thirdly, the huge difference in expenditure between cities with high and low levels of contracting may be due to factors not accounted for in the comparison or very unusual circumstances in one or both of the two groups. Fourthly, and most critical, the assumption that service levels among the compared cities were alike regarding parks and recreation services due to the number of tennis court per 5,000 inhabitants can best be regarded as outright nonsense. The amount and type of green

infrastructure and recreational facilities are indeed suspect to vary hugely among cities and should by no means be assumed to be reflected by any number of tennis courts.

Patterson & Pinch (1995)

The study by Patterson & Pinch (1995) uses secondary data in a narrative account on the effects from introduction of compulsory competitive tendering (CCT) in the UK on workforce and the organizational conditions for various services including grounds maintenance. In support of their narrative, Patterson & Pinch (1995) provide evidence for large reductions in workforce for grounds maintenance contracts won by private contractors compared to public providers (direct service organizations). Private contractors are reported to reduce the workforce by 32% on the average while direct service providers (DSOs) are reported to reduce the workforce by 13% on the average. The reduction in workforce is furthermore demonstrated to be accompanied by deteriorating employment terms and conditions and creating a labor market characterized by lower wages and precarious working conditions. The drivers behind the reported effects are argued to be strongly related to requirements in the CCT legislation. This encompasses an organizational development toward strategic centralization and operational decentralization which weaken the influence of workers as well as fragmenting the workforce by relocation to different producer units; a shift toward a business and commercial discourse focused on 'efficiency', 'performance targets' and 'consumer needs'. In their conclusions, Patterson & Pinch point out an important organizational outcome by the observation that the CCT legislation has established '*a separation of a concern for the services to be provided from a concern for those people who will provide that service*' (p. 1458). Thus, the introduction of contracting out through the requirements in the CCT legislation has reduced service provision to a matter of lowering costs.

Clark (1997)

Similar to the earlier study by Walsh & Davis (1993), the study by Clark (1997) addresses the effects of implementation of compulsory competitive tendering in Local Governments in England and Wales; however, Clark (1997) focuses solely on grounds maintenance. The study relies on survey data from a total of 268 responses from park managers in England and Wales (response rate 53 %). The study identifies key questions to be addressed by reviewing the debates in the sector for key issues. The study reports simple descriptive statistics on various key effects including value received for tax payers, quality and monitoring and staff training as well as a range of questions

related to the characteristics of contracts. 71% of the respondents reported that ‘better value for tax payers’ were achieved against 25% reporting that this was not achieved. 36% reported that quality levels had decreased against 37% that reported that quality levels had increased. 52% reported that monitoring had become more difficult against 31% that reported that monitoring had become easier. 64% reported that monitoring had become more effective against 18% that reported that monitoring had become less effective. Furthermore, 80 % reported that staff training was not included in the vast majority of contracts against 10 % reporting that this was included.

Drawbacks of the study are that it does not include the size, magnitude or perceived importance of the various effects. The study does furthermore not provide an analysis of whether the effects are statistically correlated. The drawbacks make it impossible to say whether the reported overall improvement in received value for tax payers is correlated with for example higher level of competition, more effective monitoring, size of contracts or a lack of staff training. However, given the high percentage of respondents that confirms an improved value for tax payers a conclusion in favor of a generally improved value for tax payers, this is improved allocative efficiency, seems inevitably. Similar can be said for the improved effectiveness of monitoring, albeit this may be associated with more difficulties. Regarding the question on staff training the study clearly highlights that this is not included in the reported contracting practices.

Hodge (2000)

In a meta-study of ‘all globally available studies’, Hodge (2000) calculated an estimated average cost saving for contracting out parks and recreational services about 7.5% The estimate is based on two studies by respectively Greene (1994) and Martin & Stein (1992). However, a caveat with Hodge’s estimate for parks and recreational services is that the two included studies are ill-fitted for the purpose of the meta-analysis. The findings by Greene (1994) should be regarded as utterly implausible due to severe flaws in the comparison of service levels and amount of green space provisions across cases. The findings on higher spending levels by contracting municipalities in the study by Martin & Stein (1992) is explicated by the authors to be most likely caused by a higher level of land acquisition and development activities in some municipalities. The statistics provided by Martin & Stein (1992), in other words, do not compare spending on maintenance services alone.

Due to lack of proper screening of the ‘fit-for purpose’ of the more substantial matter of the included studies for the ‘park and recreation’ category in the meta-analysis the calculated estimate for cost savings for contracting out maintenance services (7.5%) cannot be taken as evidence or any

indication for the possible effects from contracting out of maintenance services within parks and recreation as suggested by Hodge.

The study by Hodge does, however, include the study on street tree maintenance by Berenyi & Stevens (1988), but this study is grouped within a general category of ‘maintenance’ separate from a group referring to ‘parks and recreation’. Street trees should be acknowledged to be an inherent part of a city’s green infrastructure. Hodge does not provide any arguments underpinning the grouping of various services in his study as well as any list of which functions and services that are placed within each group.

Jones (2000)

Jones (2000) provides a longitudinal study of development of services in four park departments in UK during three reforms eras. The study relies on extensive qualitative interview data analyzed with the method of conceptual ordering. An era of ‘competitive compulsory contracting’ (CCT), spanning from 1988 to the mid-1990s, demarcates the introduction of strict regulations and requirements for contracting out in a pre-context characterized by ‘traditional management’. A subsequent era of ‘best value’ reforms, taking off in the late 1990s, demarcates an introduction of a more flexible and approach to service provisions. The study by Jones (2000) does not provide statistics, but a broad comparative perspective on the advantages and disadvantages of the introduction of a tightly cost-focused approach to contracting out in the context of public park services.

Advantages by introducing a cost-focused contracting regime, vis-à-vis ‘traditional management’, include more cost-efficient performance, standardization of work activities and outcomes across locations and sites and creation of information and resource systems for centralized management and decision-making. The disadvantages include a shift in focus from managing parks toward managing contracts, punitive and futile contract enforcement procedures, lack of investment in and loss of the sector’s skills base, making the areas ‘easier’ by ‘making parks fit for movers rather than movers fit the needs of the park’, loss of community contact by a shift from site-based staff toward mobile work gangs, loss of initiative, morale and creative flair in the work force by the need to follow prescriptive ‘to dos’ performed at speed and at a price, a shift in management mentality toward a ‘maintenance only culture’, and finally a reduction in standards and creation of rundown and derelict park areas low of horticultural and recreational value.

In the study by Jones (2000) the list of disadvantages is clearly longer than the list of advantages in the era of CCT. The subsequent era of ‘best value’ policies allowed managers to address some of the earlier malaises by embedding contracting practices in broader approaches which included community involvement, strategic planning and visions, a partnership approach to contractual relations as well as a public agenda for ‘reclaiming parks’.

The findings in earlier studies by Walsh & Davis (1993) and Clark (1997) is partial confirmed in the study by Jones (2000). However, Jones (2000) adds to the earlier findings by identifying a range of long-term and basically negative outcomes from the introduction of a cost-focused approach to contracting out. Jones (2000) furthermore points out the need for a broader strategic and partnership-based approach to contracting out. This finding is somehow a critical comment to the mainstream assumptions on conditions for effective and successful contracting out in the public sector. Later commentaries in articles by Beer et al. (2003) and Hebbert (2008) on the outcomes from contracting out in the context of England and Wales have furthermore paraphrased the findings in the study by Jones (2000).

Jang (2006)

A study based on a combination of available (secondary) register and survey data on 1055 US municipalities from 1997 by Jang (2006) found that contracting out services related to ‘parks and landscaping maintenance’ to private contractors (profit seeking firms) did not result in any statistically significant change in overall service expenditure while contracting out to non-profit organizations or other public providers resulted in statistically significant lower expenditures. Economy of scale and sufficient competition were furthermore found to be drivers of lower expenditure from contracting out while transactional risks such as difficulties with service specification and measurement as well as place-boundedness were discussed to be drivers of higher expenditures. However, the argument on particular difficulties with service specification and measurability as well as place-boundedness for parks and landscape maintenance compared to other public services under contract is only stated as a claim without further substantiation (p. 800). The study by Jang (2006) did furthermore not include data on service level or quality nor on the history of contracting out for US municipalities. The dynamics of contracting out and in may explain efficiency gains (Hefetz & Warner, 2004) while omission of data on service levels or quality effectively restrict a study from any conclusion on technical efficiency (Boyne, 1998b).

The findings by Jang (2006) regarding the (lack of) effect on overall expenditure level from contracting out to profit-seeking firms are congruent with the findings in the study by Martin & Stein (1992). Likewise, the findings by Jang (2006) are limited to conclusions on the overall expenditure level (i.e. comparative cost levels) and do not extend to conclusions on technical efficiency. However, while Martin & Stein (1992) in their analysis explicitly control for costs to land acquisition and development there is no indication whether the data sources in the study by Jang (2006) include or exclude these costs, however, the services are referred to as ‘parks and landscaping maintenance’ (p. 807). Overall, the conclusions by Jang (2006) seem credible regarding the empirical findings, but the theoretical interpretation and arguments can in some degree be questioned.

Lindholst (2008)

In a case-study of contracting out of grounds maintenance in a handful of historical parks and gardens in Denmark, Lindholst (2008) reported that sustained direct cost savings by 34% were realized through introduction of contracting out and successive rounds of procurement without compromised service levels and quality of service delivery. The cost levels in the case study were compared against a historical baseline where services were provided by a former – and undoubtedly inefficient, unresponsive and poorly managed – in-house arrangement. This study by Lindholst (2008) also found that management of ground maintenance services had become more effective by the introduction of contract management of externally provided services. The increase in effectiveness could be attributed to more sturdy safe-guarding practices rooted in so-called ‘high-powered’ incentives (e.g. access to economic penalties written into a formal contract).

The study is longitudinal, but do not control for other factors such as developments in price index within the sector or shift in transaction costs. However, it is very unlikely that decreasing prices within the sector or the level of transaction costs should out-weight the reported cost savings. Adding to the credibility of the study is the control for change in service levels. However, the generalizability of the study is questionable as the change in cost levels may be due to specific or untypical circumstances such as an overly technically inefficient former in-house arrangement.

Nuppenau (2009)

The study by Nuppenau (2009) provides a narrative account based on six case studies of marketization processes in municipal park departments in Denmark. In the narrative contracting out

is positioned as part of wider organizational change strategies toward an increasing ‘marketization’ of municipal park departments. Contracting out and implementation of its organizational requirements is found to have differential effects on staff as well as organizations. Firstly, contracting out has involved a reorganization of the work at the operational level where responsibilities are decentralized to staff in ways that provide greater autonomy for the individual as well as require new competencies in the daily work. Secondly, the change in organizational structures has required a change in roles, mentality and cultural outlook, including setup of new common goals, routines and performance standards as well as the individual’s understanding of hers own ‘identity’ in the organization. These organizational changes have had differential effects on staff of both positive and negative kinds. On the negative side, change processes related to contracting out where for example reported to be experienced by the staff as ‘*a time of resistance, skepticism, anxiety and insecurity*’, suspected by staff for being a way for management to get rid of unwanted colleagues (p. 162) as well as inducing a focus on fulfilling the contract instead of fulfilling maintenance needs in parks (p.166). On the positive side, for example, new performance standards and organization of work were found to be helpful in generating learning, sharing experience and focusing work efforts. The impact of competitive contracting on municipal park departments was furthermore reported to increase work pace and make work routines more efficient.

Lindholst et al. (2015)

The study by Lindholst et al. (2015) primarily addresses the implementation of quality standards in municipal park management and does only indirectly address outcomes from contracting out grounds maintenance. However, implementation of quality standards is explicated to be intimately associated with contracting out practices as for example also highlighted in the studies by Walsh & Davis (1993), Nuppenau (2009) and Lindholst (2009). Implementation of service specifications has been a requirement for pricing and monitoring of contracts. However, the study by Lindholst et al. (2015) points out that the particular version of service specification adopted for contracting out of grounds maintenance has had some drawbacks. In particular, it tends to reinforce a limited professional view on what quality is about, i.e. compliance to measurable technical specifications based horticultural knowledge, rather than adopting a conceptualization of quality that enables broader views on what services is about. Thus the study by Lindholst et al. (2015) can be seen as a

study of explanatory factors that drives some of the contracting outcomes that have been identified in earlier research.

The study by Lindholst et al. (2015) relies on secondary data sources, a document study of quality specifications as well as discussions with point of departure in the earlier research. The association of certain types of service specification with certain contracting outcomes is mainly substantiated as a credible hypothesis and no data driven evidence is provided.

3.2 Road maintenance: one study

Only one study was found in the literature search which report on economic outcomes from contracting out road maintenance. The study by Blom Hansen (2003) is presented in some details below.

Blom-Hansen (2003) provides an analysis based on register based data from all years 1988-1999 of effects on cost levels from contracting out in Danish municipalities. The main finding from the analysis is that higher involvement of the private sector for provision of municipal road maintenance (measured by the percentage of total expenditures spend on private contractors) leads to cost savings (reduced overall expenditure) without a loss of road quality, i.e. ‘real’ cost savings are resulting from involvement of private contractors in service delivery systems. A secondary finding is that scale economy matters for cost effects (a longer total length of municipal roads is significantly correlated with lower expenditure per meter road). It is also found that higher quality levels are significantly correlated with higher expenditure levels.

Blom-Hansen (2003) argues that the main finding are ‘conservative’ as the context for the study (by the national competition authorities) was characterized by ‘very weak competition’ and a degree of ‘tacit collusion’ among the private contractors in the market for road maintenance works. Blom-Hansen (2003) also explicates that the study uses the level of private sector involvement as a key predictor of cost effects, but this does not differentiate between involvement out of ‘habit’ and involvement based on competitive tendering processes.

Two arguments are provided based on indicative evidence (two secondary case studies) for explanation of the cost effects. First, cost savings may accrue due to more efficient utilization in private firms of labor force through years with seasonal differences in work load. Blom-Hansen (2003) finds this argument to be in line with the ‘ownership argument’ on why the private sector should perform better than the public sector. Second, cost savings may accrue in both public and

private provisions due to introduction of competition among public and private providers. Introduction of competition with private providers by tendering processes also forces cost levels down for public service provision. Blom-Hansen (2003) finds this argument to be in line with the ‘competition argument’ on why contracting out should lead to cost savings in the public sector. In sum, Blom-Hansen (2003) argues that a mix of ownership and competition effects is congruent with the overall empirical findings in the analysis.

3.3 Short summary

For both the road and park sector it is fair to conclude that the overall balance of the evidence indicates that cost savings has accrued from contracting out of maintenance services. The evidence for the park sector is more composite and involves more dimensions than the evidence for the road sector.

The differences between the studies of expenditure levels within the park sector and road sector may be due to differences in country context. The two studies within the park sector from the US where contracting out and competitive tendering has a longer history shows no significant cost differences in overall expenditures. The one study within the road sector is from Denmark where contracting out and competitive tendering has a shorter history shows significant cost savings from relatively higher expenditures on private contractors. Similarly, all reviewed studies which report on effects from the introduction of contracting out finds economic performance to be improved. Efficiency gains from contracting out can furthermore be expected to be more likely in contexts with a shorter histories of competitive pressures than in contexts where competitive pressures has existed for many years.

3.4 Methods for literature search

The included materials for the review were found by searches within two sources of literature. The first source included a review of existing comprehensive studies and reviews of outcomes from contracting out in the public sector in general. The second source included a review of existing studies of contracting out within park management in local governments. Literature lists in all resulting titles from the two searches were subsequently inspected for reference to relevant studies. Key words in the searches and inspections were ‘privatization’, ‘marketization’, ‘contracting’, and

‘park/grounds/green space management/maintenance’. Key criteria for inclusion in the review were reference and information on outcomes including key concepts such as ‘efficiency’, ‘cost savings’, ‘quality’, ‘service levels’ or ‘standards’ as well as more generic concepts such as ‘outcomes’ or ‘effects’. The first source included studies and reviews by Borcharding et al. (1982), Berenyi and Stevens (1988), Donahue (1989), Walsh and Davis, (1993), Domberger (1997), Boyne (1998a; 1998b), Hodge (2000), Hjelmar et al. (2013). The second source included key titles by Jones (2000), Baycan-Levent and Nijkamp (2009), Lindholst and Bogetoft (2011), Jansson and Lindgren (2012) and Lindholst *et al.* (2015).

Each title was firstly carefully screened for any inclusion or reference to services with relevance for urban green spaces / urban green infrastructure, e.g. parks or urban green space maintenance, or services that forms part of grounds maintenance services e.g. street tree maintenance. Secondly, each title was reviewed for any report evidence on service and/or organizational outcomes related to the provision of green spaces services. Thirdly, the credibility of the evidence was reviewed by assessment of the methods and data supporting any reported outcome. Some titles were excluded in this process. This includes a number of titles, such as Painter (1991) and Brown and Potoski (2003) which include grounds maintenance as part of studies with more general research purposes related to contracting out in the public sector, but not reporting on any particular outcomes from contracting out grounds maintenance. A few titles of initial interests was also excluded, such as Beer et al. (2003) and Hebbert (2008), as these only provided summarizing comments on earlier studies, but without any (re-)analysis of evidence.

Two studies by Greene (1994) and Hodge (2000) was excluded due to severe methodological problems. In a comparison of 12 assumed alike US cities, Greene (1994) report that cities with high levels of contracting spend 74.6 % less money per capita on parks and recreation compared to cities primary relying on municipal departments with public employees. However, Greene (1994) assumes that the compared cities are alike regarding their services level in parks and recreation on the basis of a similar number of tennis courts per 5,000 inhabitants. This is non-sense as the amount and type of green infrastructure and recreational facilities must be expected to vary hugely among cities and by no means can be assumed to be reflected by any comparable number of tennis courts. Hodge (2000) calculates an estimated average cost saving for contracting out parks and recreational services about 7.5%. The estimate is partly based on the study by Greene (1994) and partly a study by Martin and Stein (1992). The selected data from both studies are ill-fitted for the purpose of the meta-analysis. The credibility of findings by Greene (1994) is evaluated above. The main findings

in the study by Martin and Stein (1992) is credible, but is explicated by the authors to be most likely caused by a difference in land acquisition and development activities. The statistics provided by Martin and Stein (1992), in other words, do not include spending on maintenance services alone. However, Martin and Stein (1992) also report findings for maintenance alone but these are not used by Hodge (2000).

4 ANALYSIS – COUNTRY CONTEXTS

With contributions from Andrej Christian Lindholst, Johanna Selin, Ylva Noren Bretzer and Merethe Leiren Dotterud

4.1 Denmark

This section is partly based on an article on marketization of the municipal park and road sectors in Denmark by Lindholst, Hansen and Petersen.⁵

4.1.1 Marketization policies in Denmark

The first political initiative in Denmark which explicated various forms of marketization as systematic strategies for reforming and running the public sector dates back to the early 1980s (Ejersbo and Greve, 2014), where the Danish economy witnessed a period of economic austerity. Due to the economic crisis and the failure of the global economy to provide durable solutions, the late 1970s can be considered a *critical juncture* in the Danish and the global market economy, and one of the strategic responses in many countries (particularly in the Anglo-Saxon countries) to the global economic crisis was the introduction of marketization in the public sector. Marketization, particularly in terms of public procurement and contracting out, was launched alongside other tools for modernization of the public sector, such as decentralization, deregulation, service orientation, new technologies and human resource development. Marketization in terms of procurement and contracting out was presented as a tool for achieving ‘economic or administrative benefits’ with an emphasis on delivering services in ways that are ‘best and cheapest’. Subsequent governments in the 2000s also launched and promoted a public-private partnership (PPP) agenda for private sector involvement (and investment) in public service delivery in general and infrastructure in particular (Petersen, 2010). In spite of these attempts to promote a broader marketization agenda, the amount of PPP activity in Denmark has so far been limited and contracting out and public procurement are still dominant forms.

⁵ Lindholst, Andrej Christian, Hansen, Morten Balle & Petersen, Ole Helby (2016). Marketization trajectories in the Danish road and park sectors: A story of incremental institutional change. *International Journal of Public Sector Management*, 29(5).

The local level has in general had a relatively high autonomy vis-à-vis central government in deciding on service levels and whether services are provided by means of in-house provision or contracting out to the private market (Sellers and Lidstrom, 2007). Public provision of services was for long the municipalities' preferred form of service delivery, although the involvement of private contractors has been gradually increasing over the past decades. Since the 1980s, public procurement and contracting out has gradually become a backbone in various government and administrative policies for reforming and running the public sector (Ejersbo and Greve, 2014). The marketization agenda as well as the wider NPM reform wave has had a profound impact on municipalities' provision of services. While the level of private sector involvement in the municipalities' service provision has been estimated to be less than 10 per cent in the 1980s, it has been gradually increasing over the years and now represents 26 per cent of overall municipal expenditure on services. However, the involvement of private companies differs greatly across services and municipalities, with the general trend being that private involvement is general high in technical services such as garbage collection, road maintenance and green space operation, and more modest in social services like education, childcare and care for the disabled. Private provision, for example, represents more than 40 per cent in technical services like urban planning and road and park maintenance (Petersen *et al.*, 2015).

The general approach to public sector reform, including marketization and modernization in Denmark has over the years been characterized as one of pragmatism and incremental change rather than one of systematic principles and political ideology as well as a modest emphasis on marketization (Greve, 2006; Jensen, 1998; Pedersen and Löfgren, 2012). However, measured by the content of policy initiatives over the years, it is clear that right-wing governments have promoted the marketization agenda with greater enthusiasm and more sturdy policy instruments than left-wing governments. Especially, the characterization of the Danish approach as one of 'pragmatism' has been challenged by right-wing government initiatives in the 2000s, which has sought to increase the share of public services provided by the private sector through a mix of more or less cohesive policy instruments ranging from reformed administrative coordination, private sector rights to challenge public service delivery, binding targets for the level of contracting out in local governments and political proposals concerning implementation of compulsory competitive tendering in specific sectors.

The Social-democratic led (center-left) government that was in office from 2011-2015 momentarily chose to roll back the cohesive policy instruments while retaining political support for

innovation and public-private partnerships. Recently, an incoming right-wing government in 2015 re-emphasized private sector involvement in public service delivery and announced that binding minimum targets for competitive tendering in the local government sector will by Spring 2016 again be enforced.

This brief overview of Danish marketization policies for the past thirty years shows that new pro-marketization initiatives have gradually been launched in an incremental and steady fashion, though recent political initiatives by the liberal-conservative government re-launch binding targets for competitive tendering of municipal services, which departs from a long tradition of municipal independence and denotes a more radical type of institutional change. The ‘pragmatism’, characterizing public sector reform in Denmark from the 1980s and onward, has been supplemented with more cohesive policy pressures. Today, the general policy framework which embeds developments in the municipal parks and roads sectors may be characterized as one of ‘directed pragmatism’.

4.1.2 Demography

In an international perspective, Denmark is a small, but highly developed and densely populated country. The population, around 5.7 million, is relatively evenly distributed across the country, although more densely in a few urban centres and the metropolitan area in the capital region. Table 2 shows key demographic characteristics of Danish municipalities within the five administrative regions in Denmark. Overall, differences in Danish municipalities’ size, measured by the number of inhabitants and physical area are relatively small. The average number of inhabitants is 57,547. Seven municipalities have populations larger than 100,000 inhabitants. Copenhagen municipality has by far the largest population (570,000 inhabitants). Seven municipalities, of which five are islands, have populations less than 20,000 inhabitants. 30 out of the remaining 82 municipalities have populations between 50,000 and 100,000 while 52 have populations between 20,000 and 50,000 inhabitants. On the *average* at the regional level the most densely populated (686.5 inhabitants per km²) as well as the geographically smallest municipalities (2,558 km²) are located in the Capital Region while the least densely populated (73.8 inhabitants per km²) are located in North Denmark and the geographically largest municipalities (12,737 km²) located in the Central Region. The three geographically largest municipalities, Ringkøbing-Skjern (1470 km²), Viborg (1409 km²) and Herning (1321 km²) are located in Central Denmark.

Table 2.
Characteristics of Danish municipalities

Regional location	Number of municipalities	Municipal size within region (population) ^a		Municipal size within region (area, km ²)		Population per area (km ²) within region
		Mean	Total	Mean	Total	Mean
South Denmark	22	54,732	1,204,111	569	12,524	96.1
Capital Region	29	60,550	1,755,974	88	2,558	686.5
North Denmark	11	52,849	581,340	716	7,879	73.8
Central Denmark	19	67,340	1,279,467	670	12,737	100.5
Region Zealand	17	48,160	818,732	425	7,223	113.4
<i>All of Denmark</i>	98	57,547	5,639,625	438	42,924	131.4

Note: all figures based on 2014 data from Statistics Denmark.

4.1.3 Organisation of the public sector

The public sector is large, tax financed and provide most welfare services freely on basis of universal principles (Andersen and Larsen, 2015). The public sector is organized at three levels; municipalities, regional authorities and the central administration. The current structure consists of 98 municipalities and five regional authorities. The current structure was implemented after several years of preparation in 2007 and reduced a former number of municipalities from 271, provided a more uniform size as well as a delegated new responsibilities to the municipalities. Key objectives of the new structure were to enable a more efficient provision and administration of services through economies of scale, professionalization as well as further use of reform instruments (Blom-Hansen *et al.*, 2012).

In the post-war decades, local government became the primary provider of welfare state services in Denmark. The current system was established in the 1970s and the 2007-reform was a consolidation of this governance system. Most public services, including primary schools, eldercare, social services, local planning and urban and environmental services (including roads and parks), have been provided by the municipalities since the 1970s.

4.1.4 Municipal organization of park and road responsibilities

Within road and park services, Danish municipalities are responsible for planning, managing and maintaining municipal owned parks and green spaces as well as operation of roughly 95 per cent of the 74,500 km public road network. Maintenance responsibilities have by tradition been organized within technical departments in the municipalities, though the specific management and organizational structures differ from municipality to municipality (Gjelstrup, 1992; Nuppenau,

2009). Activities in the road sector are legally and administratively tighter regulated than activities in the park sector. While municipalities, for example, are required by law to ensure a well-functioning road network as part of the overall transport infrastructure there are no mandatory requirements for provision of municipal parks and green spaces.

Additional differences between the two sectors are overall level of spending and the involvement of private providers. The gross expenditure for all services related to road maintenance was about 7 billion DKK in 2014 – about three times higher than the gross expenditure (1.9 billion DKK) for all services related to maintenance of municipal parks and green spaces (including forest and nature areas). The expenditure for park and road maintenance accounts only for a minor fraction – or approximately 4 % – of overall expenditure on public services in Danish municipalities (Statistics Denmark, 2014).

4.1.5 National framework for contracting out

The Danish legal-regulatory framework and common standards for public procurements and contracting out with relevance for both the road and park sector has evolved substantially in the period from the 1980s to the 2010s. Public procurement in Denmark has in the 1990s and 2000s been regulated by both national and EU-regulations in a rather complex regulatory setup. At the sector level common *contractual* standards have been in place since the early 1990s. 'AB92' from 1992 is a widely used common contractual standard for construction works which also find use for maintenance works. In addition, in 2003, a specific contractual standard, 'ABService', was developed for procurement of services and maintenance work.

In both the park and road sectors, almost common professional vocabularies for specifying maintenance standards have been developed in the late 1990s (published respectively in 1998 for parks and 1999 for roads) and later revised in both sectors. State authorities have spurred and supported the development in both sectors. In both sectors, the drivers were requirements to meet tighter financial conditions (e.g. limited budgets) and support the use of competitive tendering and contracting out. The methodology for specifying maintenance standards has been based on a 'transactional' paradigm focusing on the needs for defining quality (in a measurable way), competitive pricing, control/monitoring and follow-up on service provisions (Lindholst *et al.*, 2015b).

In the 2000s, the road and park sectors witnessed the development of alternative and more collaboratively oriented approaches to contracting out. The development reflected the general

interest in the national policy agenda for partnerships and new ways of organising public-private relations. In the park sector, a concept of ‘integrated park management’ introduced a framework for integrating strategy, investments and development as part of a collaborative approach to contracting out. In the late 2000s the park sector also witnessed several experiments with various so-called ‘holistic approaches’ to contracting out based on multiple performance measures as well a collaborative approach. In the road sector, collaborative contractual approaches to maintenance termed ‘partnering’ were from the early 2000s onwards developed and implemented by the national road authorities as well as promoted for use in the municipalities. Partnering involves a formal collaborative arrangement in which partners engage in the process under a shared vision, joint activities and mutual economic incentives. Partnering provides flexibility in maintenance contracts in urban zone with relatively unpredictable conditions.⁶

During the early 2000s the municipalities also started to use long-term performance based maintenance contracts in the road sector with the purpose of ensuring a more efficient mix between investment and maintenance costs under relatively predictable conditions in particular in land zones. By 2015, our survey data indicates that about 20 per cent of all municipalities use long-term road maintenance contracts, typically running between 10 and 15 years. Furthermore, in 2013 the first fully fledged public-private partnership (PPP) in the road sector delivered a new state highway including a 30-year maintenance period.

4.1.6 The level of contracting out of park and road maintenance in Danish municipalities

By the Mid2010s, almost all Danish municipalities use private contractors for provision of park and road maintenance. Only very few municipalities rely only on in-house provision. Table 3 provides an overview of Danish municipalities’ use of different provider types for provision of park and road maintenance services. Eighty-one percent of the municipalities use private contractors in some degree for provision of park maintenance while 92 % of the municipalities use private contractors in some degree for provision of road maintenance.

⁶ See also case study for Skive Municipality

Table 3.
The use of different provider types for provision of parks and road maintenance services

Type of provider	Park maintenance	Road maintenance
	N = 74	N = 73
Use private contractors (only or partly)	81 % (60)	92 % (67)
<i>Only use private contractors</i>	11 % (8)	11 % (8)
<i>Partly use private contractors</i>	70 % (52)	81 % (59)
Use in-house provider (only or partly)	89 % (66)	89 % (65)
<i>Only use in-house provider</i>	19 % (14)	8 % (6)
<i>Partly use in-house provider</i>	70 % (52)	81 % (59)
Other type of provision*	3 % (2) ^a	1 % (1) ^b
<i>Only use other type of provision</i>	0 % (0) ^a	0 % (0) ^b
<i>Partly use other type of provision</i>	3 % (2) ^a	1 % (1) ^b

Data is based on categorical questions (yes / no / don't know) on whether the municipality used different types of providers for park and/or road maintenance services.

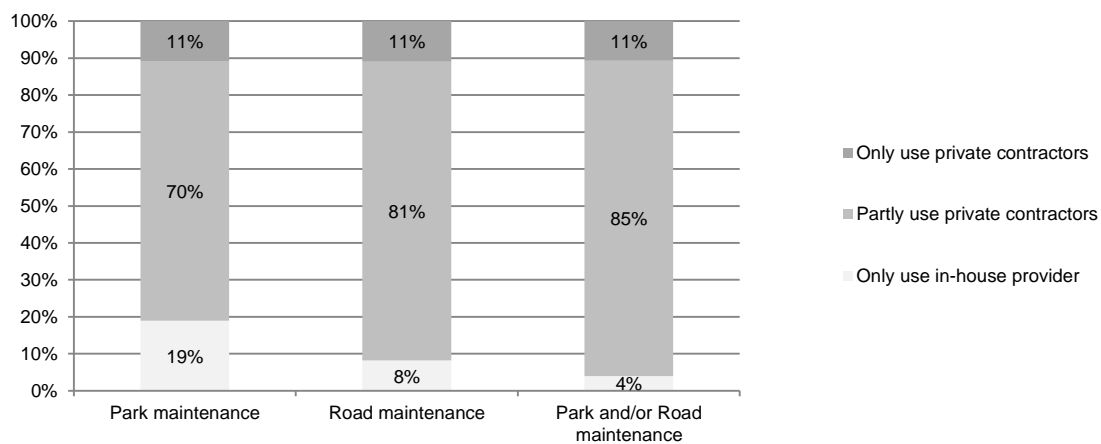
* 'Other type of provision' include: 'public-private company', 'other municipal provider', Inter-municipal company as well as 'other arrangements'.

^a Include: private land owner association (lodsejerforening) and inter-municipal company.

^b Include: Inter-municipal company.

The percentage of municipalities that only or partial use private contractors is slightly higher for road maintenance services compared to park maintenance services. The percentage of municipalities that only use in-house providers is higher for park maintenance services (19%) than for road maintenance services (8%). A mix of private contractors and in-house providers is the most frequent arrangement for provision of park maintenance (70%) as well as road maintenance (81%) among Danish municipalities. Only very few municipalities use other types of provision for park and/or road maintenance (3%). Figure 1 illustrates the distributions of Danish municipalities' use of private contractors and in-house providers for park and road maintenance services.

Figure 1.
The use of private contractors and/or in-house providers for park and road maintenance



N = 75

Table 4 provides an overview of the current distribution of parks and roads maintenance budgets between different types of service providers. The (un-weighted) average allocation of maintenance budget for private contractors found to be 27.2% for parks and 47.2% for roads. The variation in the allocation of maintenance budgets between private contractors and in-house provision is considerable for both park services (S.D. = 32.1%) and road services (S.D. = 26.8%).

Table 4.
Current distribution (un-weighted) of parks and roads maintenance budgets between different types of service providers

Statistics*	Parks			Roads		
	Private contractors	In-house provider	Other type of provider**	Private contractors	In-house provider	Other type of provider**
N	74	74	74	72	72	73
Mean	27.2 %	72.6 %	.2 %	47.2 %	52.7 %	0 %
S.D.	32.1 %	32.1 %	1.3 %	26.8 %	26.8 %	0 %
Median	15.0 %	82.5 %	0 %	48.0 %	52.0 %	0 %
Low value	0 %	0 %	0 %	0 %	0 %	0 %
High Value	100 %	100 %	10 %	100 %	100 %	0 %

Source: INOPS survey data for Denmark

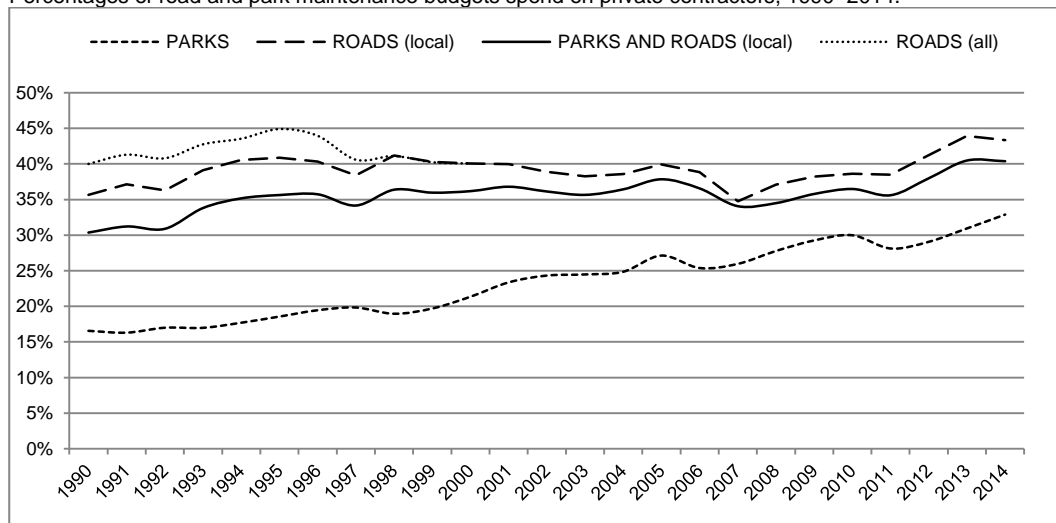
The table reports the current distribution of maintenance budgets on different types of providers.

Data is based on self-reported estimates based on the size of budgets distributed for different arrangements.

** 'other type of provider includes: 'public-private company', 'other municipal provider', inter-municipal company as well as 'other arrangements'.

Figure 2 shows the historical development 1990-2014 of the share of total municipal budgets for park and road maintenance services which is spend on private contractors. Figure 2 is based on municipal statistics (not survey data). From 1990 to 2014, the share of the total municipal park maintenance budget spend on private contractors is increased from about 17 % to about 32 %. For municipal roads (local) the share is increased from about 36 % in 1990 to 44 % in 2014. However, if the share for roads includes municipal responsibilities for maintenance of some types of state highways, which was delegated to municipalities until 2000, the share in 1990 was about 40 %. For the two sectors together the budget share has increased from about 30 % in 1990 to 40 % in 2014. Overall the two sectors have witnessed substantial increases in budget shares spend on private contractors. The municipal park sector has in comparison with the municipal road sector witnessed the highest and most consistent increase over the years. The figure also shows that the development in the budget shares has been uneven and at times decreasing in both sectors.

Figure 2.
Percentages of road and park maintenance budgets spend on private contractors, 1990–2014.



Source: Calculations based on data from municipal statistics (Statistics Denmark).

4.2 Sweden

Section written by Ylva Noren Bretzer

4.2.1 Introduction

This section aims to provide an overview of the general functions and limitations of the local administrative public – private governing conditions within the *green* and *black* administrative tasks in Sweden.

A general focus of the research project is to describe, analyze and recommend different forms of contracting out and to investigate different forms of contracting-out and public-private co-operations within the technical and green areas in municipalities. The focus is on innovation and how to involve contractors optimally. The specific competence fields under scrutiny in this study are hence twofold. The first is the technical area, which further will get labeled as *black* administrative tasks; with a specific focus on the municipal road maintenance works.⁷ The second area is the *green* administrative tasks, which refer to the maintenance of municipal parks and recreation areas, care-taking of water and fishing areas, traffic signals and lights, snow-shoveling,

⁷ The *technical sector* in the municipality normally also include city planning and building, waste and recycling, and water and sewage system issues. The technical sector may also include technical maintenance of own housing, which often is run by municipal housing companies.

playgrounds, bathing places etc. In short, these activities all relate to various kinds of land-use management.

Before we proceed, we need to make some remarks about the Swedish case in general. Sweden, as its neighboring countries in Scandinavia; Finland, Norway, Denmark and Iceland, are known in international politics to stand out for two reasons. Each of these are *unitary countries*, which means that one constitution and body of law regulates all of the country, which is contradictory to *federal states* such as Germany or the US, where you will find different legislations in each and every federal state. So, even if there are regional bodies left, these play a relatively weak role in the state-local relationships. What stand out in international comparison is on the other hand the relatively strong municipal bodies, which collect taxes from its local citizens, and the locally elected politicians who exercise budgetary power over these resources.

The ideal of “municipal independence” often is referred to, and it is even noted in the Swedish constitution. In practice though, the municipal parliaments have to fulfill the national mandatory regulations first (eg. care-taking, education, nursing) before they can consider what to do with the left-overs. Therefore, the idea of “municipal independence” is often vastly overrated, although especially mid-sized and large municipalities do have a considerable share to act on. Small municipalities with a decreasing population on the other hand, face a harsh time to even cover up for the mandatory obligations. All in all, Sweden consists of 290 municipalities, ranging from 2 400 inhabitants (Bjurholm) to 901 700 inhabitants (Stockholm). These vast differences naturally cause widely diverging pre-conditions for the various municipal activities and costs.

Table 5.
Municipal typology according to SALAR (2011).

Municipal type	N	Municipal type	n	Municipal type	n
1. Large cities	3	5. Commuter municipalities	51	8. Rural municipalities	20
2. Suburban cities	38	6. Tourism economy municipalities (large summer population, small winter population)	20	9. Municipalities in densely populated regions	35
3. Larger cities	31	7. Commodity producing municipalities	54	10. Municipalities in sparsely populated regions	16
4. Suburban municipalities to larger cities	22				

Table 4 displays the municipal typology used by the Swedish Association of Local Authorities, SALAR, which often is very useful also in a research context. By analyzing similar municipalities together, it is most often useful to understand variations within a single category, than by working with variations across the full range of municipal conditions.⁸

4.2.2 Public-private relationships in Sweden – a general overview

As the core task of this project is public-private relationships, some general remarks about these processes should be made here (further: PP-relationships). Sweden has not remained unaffected by the international New Public Management-trends (NPM) of the past decades. The NPM movement has brought a cluster of ideas and innovations into the public sector, in order to standardise, effectivise and tender out what not necessarily needs to be produced “in-house” by the public sector itself. The public sector grew fast between 1970 up to the 1980s, and in the back-waters grew the criticism about the public sector being inefficient, too bureaucratic and being fearful to competition. The solution to the eternally growing bureaucratization problem in these days, was to import role models from the private sector; the “market” and the “company” became ideals also for the public activities (Almqvist 2006: 11). Three core elements were introduced; tendering in competition, contract-steering and control. What partly happened here was that the problem of bureaucratic inefficiency was supposed to be solved by even more bureaucracy in terms of contract-relationships, evaluation, and management by objectives at the same time as various detailed quality indicators were introduced. At the same time, citizens were transformed to “clients”, and politicians and top management concentrated more on budget steering and deciding on principal guidelines; while the translations into activities were directed downwards to executing levels in a classical Weberian manner (cf. Hasselbladh 2008: 197). The robotisation of skilled professions was once again put in the first room, in order to dampen professional demands.

If the NPM-transformations have been successful or not, are at present under large debate in Sweden. Not only were these reforms introduced without “scientific evidence” which tends to be of great importance in the medical and social treatment areas, and which constitute important evaluation tools of the system itself, but the basis for the reform was more or less a scientific doctrine with no or little room for criticism. NPM-reforms has since the early 1990s been

⁸ As the distribution of the municipalities are not normally distributed, but rather exponential, hence is it most often most useful to transform municipal sizes to a logarithmic scale.

introduced in child and elderly care, hospital processes, social work, labor market matching and care for the disabled. About one out of five employed in the welfare-sector is privately employed today, which is a great increase of the private share, according to Hartman 2011:258. She edited a book together with several of the previous pro-reform researchers, with the intention to evaluate what evidence there were for the reform effects. The results were meagre; they found little or no clear evidence for improved efficiency in the mentioned sectors. Rather, competition was concentrated to the urban areas (as many different providers can find their markets there)⁹, ideas about ‘customer choice’ followed the same pattern, and they found vast information asymmetries as quality indicators are lacking; as people tend to measure what is possible to measure (input measures) instead of output measures relating to quality. Her book caused a large debacle in the Swedish media, and her position as research officer at the SNS was withdrawn.¹⁰ As a consequence, a reputable university professors resigned from SNS and a number of professors wrote a critical debate article about the incident in the Daily News (national news-paper).¹¹

Where these reforms or transformations are going are yet too early to be known. We know that NPM is about steering, or its intentions are to gain stricter control over organisations (Hall 2012). However, this seems to take place to the price of the autonomy of professional expertise; the unions of the doctors, the policemen and school teachers have jointly criticized the present developments.¹² What must be noted in addition is that contracting out in the green sector initially does not seem to be any complicated matter; rather, I believe most of the locally green tasks have been kept “in-house” without any larger NPM reforms, meaning that the traditional bureaucratic model applies here. This comment relates to the small share of the public responsibilities regarding green areas, here we mostly talk about green lawns, parks and public areas within the city borders. The “black sector” in the municipalities, referring to road maintenance may be conducted after occasional procedures of tendering, and sometimes by own personnel. But before we enter into this discussion in further detail, we need to elaborate the contracting-out legal framework on a general level, as the exercise of partnerships and similar constellations.

⁹ In larger cities, the general assumptions of a free market are much more applicable, compared to the smaller municipalities or rural areas. In larger cities you find a plurality of providers, hopefully no or little monopolisation, and information is perfect for both buyers and sellers.

¹⁰ SNS is short for the Study organisation for Business and Society (sv. *Studieförbundet Näringsliv och Samhälle*). One resigned professor was Olof Peterson. Further on, the Chief Executive Officer at SNS resigned.

¹¹ <http://www.dn.se/debatt/sns-har-fallit-undan-for-naringslivets-patryckningar/>

¹² <http://www.dn.se/debatt/vara-yrken-har-kidnappats-av-ekonomernas-modeller/>

See also <http://www.sjukhuslakaren.se/2013/09/09/nara-9-000-har-skrivit-pa-uppropet-idag/> and <http://professionsforbundet.se/>

4.2.3 *The Public Procurement Act in Sweden*

Historically, public procurement was stated in the Ordinance of public procurement (1986:336), which directed the state level. Local governments' and regional regulations were not initially stated in the national law, but the locally decided procurement regulations related to the national formulations. From January 1994 and onwards, it followed from the EES agreement that Sweden should implement the EC directive on public procurement, and in Sweden we decided to regulate public trade below the threshold values (B-services)(Sveman 2009:9). The present law (2013:2007:1091) on public procurement (in short: LOU) was set into effect from January 2008, and it supports the EU directive 2004/18/EG on public procurement. A novelty was however introduced here; services within water, energy, transport and postal services were not included in the LOU. Instead, these services follow the law (2007:1092) on procurement of water, energy, transport and postal services (in short: LUF).

The central point of discussion has been whether LOU applies in municipalities when buying services from municipally owned companies.¹³ The revised version of LOU, in effect from January 2013, allows municipalities to buy from own companies without applying LOU (a specific "in-house" exception).¹⁴ This means that municipalities that run green and/or black services in publicly owned company forms, or in associations with other municipalities, does not necessarily need to activate LOU in order to maintain their ordinary tasks. When tendering building concessions, also separate legal frameworks applies. Various forms of public-private partnerships are not regulated at the EU level either, nor it is on the national level. But when public/private constellations need to buy something, the LOU regulations should get applied, or parallel regulations for concessions (for example in building projects).

4.2.4 *The exercise of different forms of partnerships*

Public policies often refer to *partnerships* in often a very loose and imprecise ways. Partnerships are semantically positive, but they may hide potential conflicts. Partnerships were probably invented in

¹³ The Teckal case (C-107/98).

¹⁴http://brs.skl.se/skbibl/cirkdoc.jsp?searchpage=brsbibl_cirk.htm&search1_cnr=12%3A50&op1=&type=&db=CIRK&from=1&toc_length=20&currdoc=1

the international relations context, where collaborative processes between world business actors and public actors especially took off at the Earth summit in Johannesburg in 2002. Thereafter, the World Business Commission for Sustainable Development (WBCSD) was established as the governments of the world had declared that ‘we cannot achieve sustainability without the business sector’. Further, the Millennium Development Goals is also working in a public-private (PP) spirited manner, and similar processes also relate to issues of clean water and deforestation.

In the European Union, it has for long been the core idea that projects that apply for funding should constitute partnerships between public, private and also civil society associations, when possible. The more recent Europe 2020 strategy further emphasize the need to involve project partners from local to national levels, and from public as private sectors.¹⁵ There have been many EU projects unfolding in Sweden, primarily directed towards socially weak areas, which have put private and public actors into a horizontal collaboration mode, which substantially have loosened up the private/public divide which traditionally has been the pattern. These projects have normally been quite limited in scope, the EU has supported a large share of the financial resources, but the public and private actors also had to put their shares on-to the table. Projects have been limited in time and scope, and they have undergone surveillance from the County Councils or national authorities in Sweden.

Another group of partnerships are the Public Private Partnerships (PPPs) which often relate to large investment projects. Famous examples in Sweden are the Arlanda airport railway (finished 2000) and the *New Karolinska*¹⁶, a new hospital under construction in Stockholm. Core incentives here are that the partners share the risks, and that public partners often can get more advantageous capital rents than private actors can. Problems that need to be sorted out are the future ownership of the project, future maintaining responsibilities and total project costs. These kinds of models have also transferred to the local level, as they often have previous experience from partnered projects in the social area.¹⁷ However, another risk is that the partnering concept circumvents the LOU-procedures in such a way that either known contacts get a preference, or the municipality binds itself too close to one partner and later-on it becomes problematic to replace the partner with a more advantageous competitor.¹⁸ There is a risk that the intentions of LOU in these circumstances are

¹⁵ European Commission (2014) and Kappeler & Nemoz (2010).

¹⁶ <http://upphandling24.idg.se/2.1062/1.337902/sveriges-storsta-ops-projekt>

¹⁷ http://www.skl.se/vi_arbetar_med/valfrihet/driftformer/offentlig_och_privat_partnerskap

¹⁸ There is a right according to LOU to conduct a Competitive dialogue (sv. *konkurrenspräglad dialog*) with possible partners before a public tender is official.

bypassed by PPP.¹⁹ On the other hand, many earlier investments that could not happen solely on market terms, nor entirely on private terms, will get realized with the PPP model. It is necessary that the decision-makers have all the information on the table when entering these kinds of projects.

4.2.5 Public-private contracting in the Swedish context

Contracting out in the green and black areas started at national level, as the LOU first applied to the state level when it was introduced back in 1986. The Swedish Transport Administration (which was constructed by a merger of the Swedish Road administration, the Swedish Railway Administration, the Air transport administration and the Maritime Administration), and in their responsibility for the long-term maintenances of various transport systems, the share that was contracted out was 22 percent of the total turnkey contracts (sv. *totalentreprenader*). Also, consulted contracts were 20 percent (Year report Trafikverket 2013: 78).

Contracting issues were not mentioned in the yearly report for the Swedish Transport Agency or in the report of the Environmental Protection Agency, nor was it stated in the report from the National Heritage Board. However, the latter contained complaints about too many contracts that had been appealed against, which causes delays for archeological digs etc.

Table 6.
National administration agencies within green and technical areas

State agency	Responsibilities	Size (Msek ²⁰ costs per year; number of employees ²¹)
The Swedish Transport Administration (sw. Trafikverket)	Is responsible for the long-term planning of the railways, road system, shipping, and air transport systems. Also responsible for construction and maintenance of state road and railway networks	35 Msek, 7 004 employed
The Swedish Transport Agency (sw. Transportstyrelsen)	Is working out regulations, supporting the quality of the transport services, and maintain registers of the transport vehicles.	1 Msek 1 853 employed
The Swedish Environmental Protection Agency (sw. Naturvårdsverket)	Protection and administration of national parks (18 600 acres in total, of which 11 700 acres are productive) Monitoring of environmental objectives Monitoring of how environmental policy tools operate in practice	1,4 Msek ²² 508 employed
The Swedish Forest Agency (sw. Skogsstyrelsen)	Protection of the forestry landscape in a long-term sustainable production. Protection of cultural heritage values.	1,1 Msek 1 456 employed

¹⁹ The 2008 crisis bear some evidence that sometimes projects had started without the sufficient resources. See for example EPEC (2009). *The financial crisis and the PPP market*.

²⁰ Msek refers to billion Swedish crowns, SEK, which is the national currency.

²¹ Including temporary employed.

²² A large share of this amount was used to buy land and forests for, to be included into the national protection plan.

The Swedish National Heritage Board (sw. Riksantikvarieämbetet)	Preservation and restoration of historic environments Archeological commissions Archives	0,43 Msek 371 employed
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Sources: Information in the table is based on data from yearly reports in each authority. (Trafikverkets årsredovisning 2013; Transportstyrelsens årsredovisning 2013; Naturvårdsverkets årsredovisning 2013; Skogsstyrelsens årsredovisning 2013; Riksantikvarieämbetets årsredovisning 2013).

Table 6 displays the primary national agencies with responsibilities for the transport systems at large, as environmental protection, forestry and cultural heritage issues. The Swedish Forest agency²³ do not support or maintain forest land. Rather, they act as the governmental authority in relation to the mostly private forest owners, as roughly 50 percent of the forest land is privately owned, while around 40 percent is publicly owned by state agencies or by companies run by the state.²⁴ The primary task of the Forest agency is to secure that the forest laws and regulations are respected. This is conducted by continuous surveillance and close collaboration with County administrations.

4.2.6 Public-private contracting from state to local level in Sweden

What is the legal framework in order to strengthen the contractual practices within the green and black areas in Sweden? As we saw in the previous section, when we talk about forest land it is either in private hands, or placed in state-owned companies.²⁵ In this regard, it doesn't seem to be necessary to contract out the forest maintenance, as it primarily is done by "in-house" employees. A qualified issue here is of course whether publicly owned company activities ought to be labelled as "public" or "private"; which not either the practice is applying along any coherent lines. Ownership and profit-making is clearly the public, but in statistical terms in the public budgetary records, companies of all kinds are clearly labelled as private.²⁶ At the national level, it seems to be most relevant to discuss tendering in the (black) construction sector when dealing with either producing new roads, or maintaining the present road infrastructure. As a matter of fact, it is hopeless to get a general overview of the level of public tendering in Sweden at the moment. The recent investigation SOU 2011:73 states that *"about half of the public tenders that take place are missing in the tenders*

²³ www.skogsstyrelsen.se

²⁴ 50 percent of the Swedish forest land is privately owned, while about 40 percent is owned by state owned or by state-owned companies.

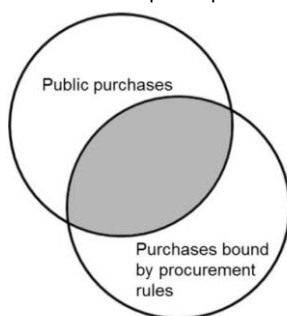
²⁵ The state-owned forestry company Sveaskog owns some 4,1 million acres out of which 3,1 is productive land. This ownership represents 14 percent of the Swedish forestry (Sveaskog årsredovisning 2013).

²⁶ This is argued on the basis of statistical records dealing with the employed workforce in Sweden, and the national GDP accounts which count the companies to the private side – as they operate underneath the Limited companies Act (sw. Aktiebolagslagen 2005:551).

Sweden reports to the EU”, due to inadequate statistics in the field. The Swedish Competition Authority issued a report stating that the number of public tenders in 2011 were 19 314, where municipalities and regions together were responsible for 19% of the total, government for additional 20%, and public companies and other were responsible for the last 29% (Konkurrensverket 2013:10, p. 14, 18).

As Konkurrensverket rightly points out in their report from 2013, public expenses as share of GNP is not the same as public purchases. Public expenses consist of transfers (allowances), salaries, rents etc. In addition, the public budget is strengthened by income fees on various services (road taxes in Stockholm and Gothenburg for example). Public purchases therefore consist of publicly financed private goods (sv. *sociala naturaförmåner*²⁷) (21%), Usables (58%) and investments (21%) (Konkurrensverket 2013:9, p. 19). Figure 3 illustrates this conceptual limitation, where purchases under the LOU/LUF regulations may not necessarily be part of the public expenses, as publicly owned companies are registered as private purchases, but also apply the LOU/LUF regulations.

Figure 3.
The limitations of public purchases under the LOU or LUF regulations.



Source: Konkurrensverket 2013:9, p. 9.

On the other hand, all public purchases may not be in focus for LOU/LUF as about 2/3 of these expenses relate to salaries and transfers (social security, social welfare, employment security etc).

²⁷ This is defined as services that citizens “buy” from private providers, such as childcare, education, health-services or medicines, which are privately provided but publicly financed.

4.2.7 Institutional frameworks in the 'green' and 'black' areas in Sweden

The tendering practices in Sweden has clearly evolved over time, driven by the EU legislations originating from 2004/17/EG and 2004/18/EG to the most recent updates; KOM(2011)15, the *Green paper on the modernization of EU public procurement policy*, (summarized in table 2 below). On national level, the Law (2007:1091) on public procurement has been into effect applying to all public actors when purchasing tools or services above certain threshold values.²⁸ An on-going discussion for many years was, whether public agencies had to tender a service publicly, let's say in energy supplies, if it at the same time was the owner of an energy producing and supplying company. In the Teckal-criteria expressed in Swedish law in 2013 (but based on the Teckal case from 1999, C-107/98 Teckal), public agencies can buy from own companies or association in which the municipality is a member without tendering, if the tendered service/products are the primary activity of that company or association.

The state agency with special responsibility to look after, or surveil, competition issues is the Swedish Competition Authority (sw. *Konkurrensverket*). Their primary tasks are to enhance free and fair competition in the Swedish markets, and supporting an effective procurement in the public and private markets. They also support with judicial recommendations in these matters, and they also exercise surveillance over the on-going tendering activities on the Swedish markets. All tendering activities are channeled through a number of private actors, see for example and www.opic.com, www.visma.se, www.upphandlingsstod.se and <http://upphandling24.idg.se>. A 'cost-free' alternative is www.e-avrop.com. The national agency Kammarkolleget (no translation exists) was earlier responsible for publishing the tendering calls and contracts, but has recently handed it over to private actors. Instead they should, in collaboration with The Swedish Competition Authority, update the guidelines for the market actors. They will get published winter 2014/15.²⁹

Table 7 displays a brief overview of the national institutional framework which at a *general level* regulates the national framework concerning rules of the public purchasing game. When it comes to the *green* and *black* areas specifically, the LOU must be complemented by various quality standard instruments, securing the politically agreed quality standards of these resources. The green

²⁸ The upper limit for direct procurement is € 54 600 after 1 July, 2014, even if specific documentation is needed from contracts exceeding € 10 800 (or 100 000 SEK). This relates to LOU organisations. Threshold values are exercised for state authorities a above € 134 000, or € 207 000 for municipal agencies, which states when full LOU is exercised (B-contracts). For building orders full LOU applies for contracts over € 5 186 000 (A-contracts, state as local agencies). The stated thresholds are updated every second year (Konkurrensverket (2014). *Upphandlingsreglerna – en introduction*. s. 13). ISBN 978-91-88566-25-6.

²⁹ www.kkv.se/t/Page_____9719.aspx

area is somewhat more difficult to pin-point which quality standards are in focus, apart from the more general Environmental code which applies over all environmental issues.³⁰ On the other hand, the recommendations provided by Movium are scientifically founded, but unclear to what extent they also are publicly sanctioned. In the black sector on the other hand, there's much more public elaboration on what specific quality properties roads should exhibit, in order not to be lethal or to cause damage to motorists using them. There's also a general regulation for how roads and streets are allowed to be designed³¹, which is not elaborated to the same extent for local parks and alike. The latter case is much more up to deliberation between local politicians, tenants and house-owners in the neighboring surroundings and public discussions on how to design – or protect – a common green area when the Planning and building Act is claimed.

Table 7.
Institutional frameworks and support systems for tendering in green and black areas

Institutional level	Frames and support systems	
Primary EU law	<ul style="list-style-type: none"> • 2004/17/EG: procurement coordination for water, energy, transport and postal services • 2004/18/EG: coordination of procedures for the award of public works, public supply contracts and public service contracts • KOM (2011)15: Green paper on the modernization of EU public procurement policy 	
National law	<ul style="list-style-type: none"> • Law (2007:1091) on public procurement, LOU <ul style="list-style-type: none"> - A-contracts - B-contracts - Framework contracts etc. • Law (2007:1092) on public procurement in the areas of water, energy, transport and postal services, LUF • January 2013: The Teckal-criterias applies, public agencies can buy from own companies without tendering³² • From 1 July 2014, specific reasons should be documented if Direct procurement is exercised up to 	
Provider of opened public tenders	<ul style="list-style-type: none"> • www.konkurrensverket.se • www.e-avrop.com • www.opic.com • www.upphandlingsstod.se • http://upphandling24.idg.se • www.visma.se 	
	Green	Black
Ordinances Standards	<ul style="list-style-type: none"> • Environmental Code (1998:808) Ordinance (1998:1252) on area protection according to the Environmental Code etc. • Planning- & building Act (2010:900) • Green facts (Movium thinktank) 	<ul style="list-style-type: none"> • The Swedish Transport Administration's technical demands and advice for roads³³ • TRVK/TRVR demands and advice³⁴

³⁰ This might be an exaggeration, but it covers quality of water, air, the built environment, and various ways to protect natural resources [against more commercial resource uses]. As the public maintenances of for example public parks are not contested, or seldom seen in conflict with commercial uses, this law is not really the focus for the park administrations.

³¹ www.trafikverket.se/Foretag/Bygga-och-underhalla/Vag/Utformning-av-vagar-och-gator/

³² www.kkv.se/t/Page___6333.aspx

³³ www.trafikverket.se/Foretag/Bygga-och-underhalla/Vag/Tekniska-dokument/Tekniska-krav-och-rad/

³⁴ www.trafikverket.se/Foretag/Bygga-och-underhalla/Vag/Tekniska-dokument/Vagteknik/TRVKTRVR-kravrad/

Moreover, in order to display how the ‘green’ and ‘black’ areas operate in the Swedish local context, we need to specify some of the fundamentals of Swedish local governments. These are primarily operating under the Municipal Law (1991:900), and together with the national Constitution, these together states that primary regulations are set in the national parliament, while local governments exercise and execute these laws and regulations. The local ‘self-independence’ mentioned earlier, makes the 290 local governments able to decide *how* should for example green and black tasks be designed, carried out, tendered; meaning that road designing is a different business in the cities of Stockholm or Gothenburg, compared to what it is in the most northern rural local constituencies. Local governments adapt to local circumstances of geography, population, development needs and economy. This is made through passing political decisions through each and every local parliament, or possibly the ‘green’ or ‘black’ boards underneath. Swedish municipalities have pretty extended administrations underneath the boards, it is the administrations – and sometimes the companies – that exercise the decisions taken at the political level. Smaller municipalities may also collaborate together in Municipal collaborative associations, or networks, in order to undertake the missions stated from the national level.³⁵ Persons in municipalities dealing with the tendering issues may work on many different kinds of authorities, which soon shall be elaborated further. But before we move to the general empirical picture, we shall say something about how this investigation was carried out.

4.2.8 A note on variations on “green tasks” and “technical administration”

Variations in the organization of the technical administrations in Sweden are least among smaller municipalities. Here, both the green and black tasks were most often a responsibility on the desk of the Chief of technical administrations [teknisk chef]. Sometimes there is added an Operations Manager [driftschef] or a Street Manager [gatuchef] underneath, who is the responsible for management and maintenance. This information was evident at web-pages in roughly 50 to 75 percent of the municipalities. Sometimes this information was found underneath the chief Planning Officer [samhällsbyggnadschef] but with no information about who’s in charge underneath of him

³⁵ See the municipal association in Norra Västmanland and Östra Smålands Kommunalteknikförbund, www.norberg.se/bo-och-bygga/information-om-nvk and <http://osk.hultsfred.se/>
In Stockholm there are signs that traffic planning, traffic maintaining and traffic entrepreneurs may form a collaborative networks. See further: www.sll.se/Global/Politik/Politiska%20organ/Trafiknamnden/2014/2014-09-23/p33-Svar-pa-skrivelse-S-samverkan-kommun-trafikutovare-TF.pdf

or her. Further, problems clearly increased with size, in larger municipalities there could be many different positions, and it took more effort to find the right persons out. Persons can be ‘at the top’ of his/her administration, or pretty ‘deep down’ in the organizational capillaries. Variations found were for example:

- Sometimes it is the internal procurement unit that holds these tasks coherently underneath the Head administrative office, but they act as a LOU competence resource – but they don’t sit on the detailed quality specifications
- Green and black procurement tasks were placed at ‘development units’, instead of at planning or technical offices (about 10)
- Outsourcing or sharing these responsibilities with other municipalities (Vadstena & Motala)
- Street maintenance at municipal Energy Companies, or ‘technical services’ in a municipal company³⁶ (10 to 20 municipalities)

In larger cities, responsibilities could be shared between Street Managers, Parks & nature, City Planning office, Technical administration, Traffic department, Development unit, Energy companies or even town boroughs.

³⁶ The municipal Street Manager could be placed at a municipal company (few cases).

4.3 Norway

Section written by Merethe Dotterud Leiren

As the literature is limited, supplementary interviews have been carried out with representatives of key interest groups, representing local park and road services: *Park, Bath and Sports* and *Norwegian Association of Municipal Engineers*. Information has also been gathered from civil servants in two municipalities: one large (Oslo) and one small municipality (Kvinnherad).

4.3.1 Laws and regulations

Norway is not an EU member and therefore does not participate in the EU legislation processes. However, EU rules addressing the common market apply in Norway as the country is a member of the European Economic Area (i.e. Norway is obliged to transpose EU law). EU influence has been extensive in the Norwegian transport sector. According to the white paper ‘Outside and Inside: Norway’s agreements with the European Union’ (NOU 2012: 2), the number of transposed legislative EU acts in Norway have been the second-greatest in the transport sector – only second after the food sector.

One key law, which adheres to the EU Procurement Directive (2004/17/EC), is the Public Procurement Act. It requires that all public procurements above a certain threshold adhere to the rules of competition.

Other important national laws include regulations of different organisational types, for example the Limited Liability Companies Act, which regulates all types of such companies – public as well as private. Another law is the Local Authority Act³⁷, which regulates municipal and inter-municipal undertakings.

For roads, the Road Act regulates safe planning, building, maintenance and operation of roads with the aim of ensuring safe traffic, including consideration of other societal interests. There are also environmental laws that are related to parks and roads such as the Biodiversity Act³⁸, which regulates among others the use of plants and pesticides and the Pollution Act³⁹. These are relevant as for example, some municipalities have experience issues, using too much salt on roads.

³⁷ <http://www.handboka.no/Sak/Lover/Kommune/kol11.htm>

³⁸ <https://lovdata.no/dokument/NL/lov/2009-06-19-100>

³⁹ http://www.regjeringen.no/nb/dok/lover_regler/lover/forurensningsloven.html?id=171893

4.3.2 *Managerial systems and standards*

There are a few managerial systems available for the park area, for example Norconsult's *ISY park*⁴⁰, which offer a complete management system, and *Focus Anbud*⁴¹, which offers a system for management of procurement processes. Both systems integrate the Norwegian Standard's 'NS3420' which contain a service specification for horticultural works. For roads, the Norwegian Public Road Administration follows several national handbooks that set road standards. These are compulsory for national roads, while several counties have agreed to follow them; however, it is disputed as they are considered to increase costs by creating roads that are 'too good'. It is not common to follow these handbooks among municipalities.

4.3.3 *Professional associations*

In both the park and road sector there are associations that provide support to their member municipalities. *The Norwegian Association of Local and Regional Authorities* do not has particular expertise with regards to parks and municipal roads; other associations are more important. *Park, Bath and Sports*⁴² is the largest interest organisation providing forums, information and competence development within the green areas. Its resources are based on project financing from the Ministry of culture, membership fees, conference and course fees and other project financing. The association has organised several meetings focusing on competitive tendering as a topic.

Similarly, for roads there is a road department within the *Norwegian Association of Municipal Engineers*⁴³, which is an association for technology and the surrounding and natural environment. It has 110 municipalities as members from rural and urban districts. They share knowledge and develops standards, which are also accessible for non-members. Ten members have for example, recently created a common standard for digging licences.

In addition, it should be mentioned that some municipalities have local support functions. For example, in Oslo there is a separate agency which focuses on framework contracts for all the different policy areas, which the municipality is responsible for. The municipality also has an internal web page about public procurement issues, which includes information about how to arrange for procurements etc. The civil servants working in this agency are trained in issues of corruption and other economic or illegal issues.

⁴⁰ <https://www.nois.no/produkter/fdv/isy-park/>

⁴¹ <https://www3.focus.no/produkter/focus/focus-anbud/>

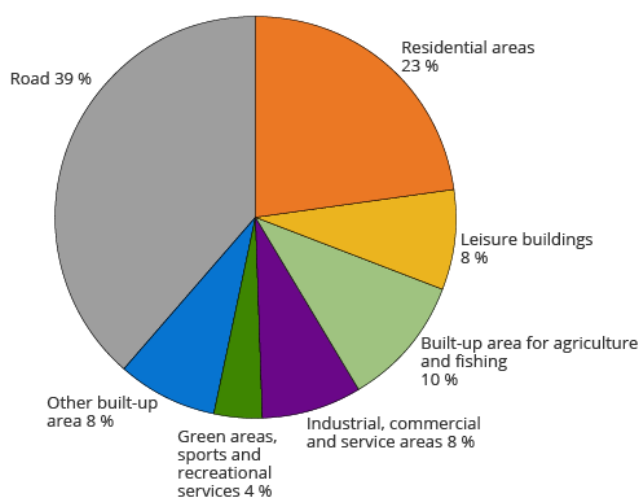
⁴² <http://badparkogidrett.no/>

⁴³ <http://www.kommunalteknikk.no/>

4.3.4 The built-up area and resources spent on roads and parks

Roads and parks make up considerable amount of space and there are considerable public resources being spent on such services. A calculation of land use in Norway shows that land used for roads is 39 percent and dominates the built-up area (i.e., buildings, structures and permanently sealed surfaces and associated areas) (Statistics Norway 2013⁴⁴). In total, there is approximately 2,100 km² of space for road. Green areas, sports and recreational services account for 4 percent of the built-up area.

Figure 4.
The proportion of built-up area in Norway in 2013.



(Source: Statistics Norway⁴⁵)

Residents of the largest cities have poorer access to areas for recreational walking compared with residents in smaller cities (Statistics Norway 2013⁴⁶). This is also the case regarding access to smaller recreational areas, but the difference is smaller. About 44 percent of residents in all urban settlements have safe access to areas for recreational walking and about 43 percent have safe access to smaller recreational areas.

The following illustration shows how much resources have been spent over time on operational tasks for roads in the Norwegian counties (see the appendix for actual numbers, including numbers for municipal roads)⁴⁷.

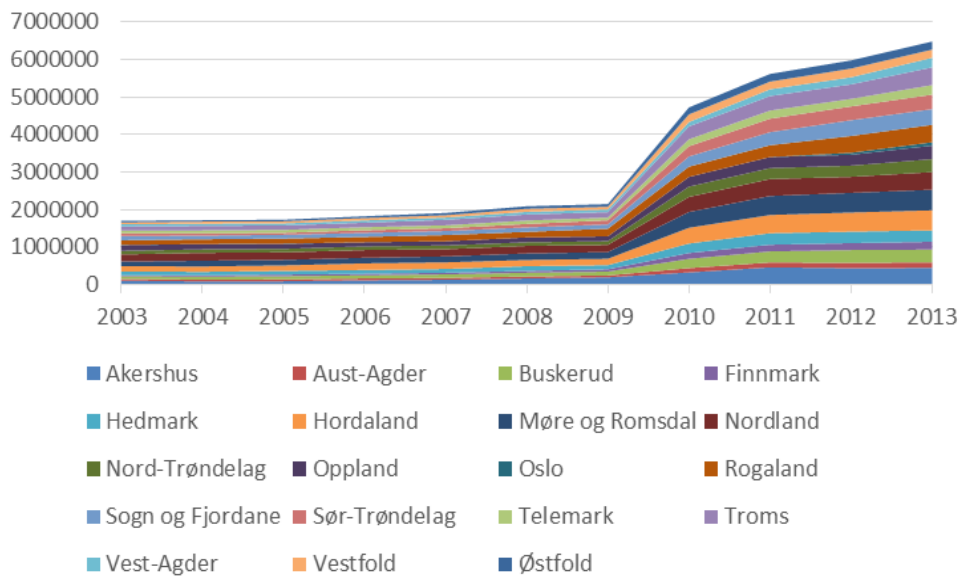
⁴⁴ <http://www.ssb.no/en/arealstat>

⁴⁵ <http://www.ssb.no/en/arealstat>

⁴⁶ <http://www.ssb.no/en/natur-og-miljo/statistikker/arealrek/hvert-2-aar>

⁴⁷ No similar statistics found for parks.

Figure 5.
Net operational costs (1,000 NOK) for county roads



(Source: Statistics Norway)

4.3.5 *Different ways of organizing 'black' and 'green' public services*

While public park services are local responsibilities, road responsibilities are in the hands of three different political levels: national, regional and the local. Literature about how local park and road services are organised in Norway is lacking. The focus has mostly been on the national (e.g., Boge 2006; Ravlum and Sørensen 2005) and regional level (Leknes and Gjerstad 2013; Leiren and Krogstad 2014). Therefore, the INOPS project will make an important empirical contribution to this field in Norway. This section gives a preliminary overview as to how local park services and local and regional services are organised in Norway. There are 19 counties and 430 municipalities.

4.3.6 *Organisation of park services*

According to one informant, there are as many ways of organising park services as there are municipalities. Some have organised park services with sports (this is the traditional model), others with buildings or roads. For example, the municipality of Kvinnherad with 13,000 inhabitants has organised the park responsibility together with buildings, as parks are usually in front of buildings. In this municipality there are not so many densely populated areas and hardly any parks along roads. Moreover, some municipalities (e.g., like Kvinnherad) have invested in their own equipment

and carry out the services internally, others borrow equipment from other municipalities or they have outsourced operational tasks. Some of the large cities (e.g., Oslo since 2004) have delegated parts of the green service provision to neighbourhoods, which traditionally take care of health services. This is sometimes criticised due to lack of competence in the administration of these neighbourhoods or among the workers, who carry out the operational tasks: for example, when people who receive social benefits are set to carry out park services.

Outsourcing of park services has occurred to a lesser extent and later in Norway than in Denmark and Sweden. It has also occurred at a slower pace than for roads. However, there has been a clear development of increasing outsourcing during the last decade. Most of the largest cities have outsourced their park services, making use of competitive tendering. Oslo has outsourced 100 percent of their park services. Bergen has done the same with the exception of a small area in the city centre. In contrast, Trondheim carries out the maintenance tasks of parks internally in the municipality. Trondheim has only carried out one pilot of competitive tendering in one of its neighbourhoods.

When outsourcing occurred in the neighbouring countries, there were expectations about a transfer of such policy to Norwegian municipalities. As part of this development, some cities initiated a separation between the procurement body and an operator. Such re-organisation contributed to create a better overview of the municipal responsibilities. For example, it has been common to employ students during the summer months. They took care of all green areas whether public or private, as they did not always know what was public and what was private. In addition, to creating a better overview of what was actually a responsibility of the municipality, the municipalities started to make IT tools in order to improve the stipulation of costs based on space.

Several mid-sized municipalities have also outsourced their park services. Drammen was the first municipality to do so, around the year of 2000. Bærum followed suit as the second municipality to outsource its park services. Bærum created its own operation company and carried out some tenders where also private companies won the bids. However, this municipality has decided to re-integrate some of the services, arguing that competitive tendering was expensive. Sometimes mid-sized municipalities use competitive tendering in order to test the price level, i.e., to check how much they would get for a certain amount of resources.

Other mid-sized municipalities such as Sandnes, Skien and Porsgrunn, have internal operators similar to the model in Trondheim. These municipalities have not introduced competition.

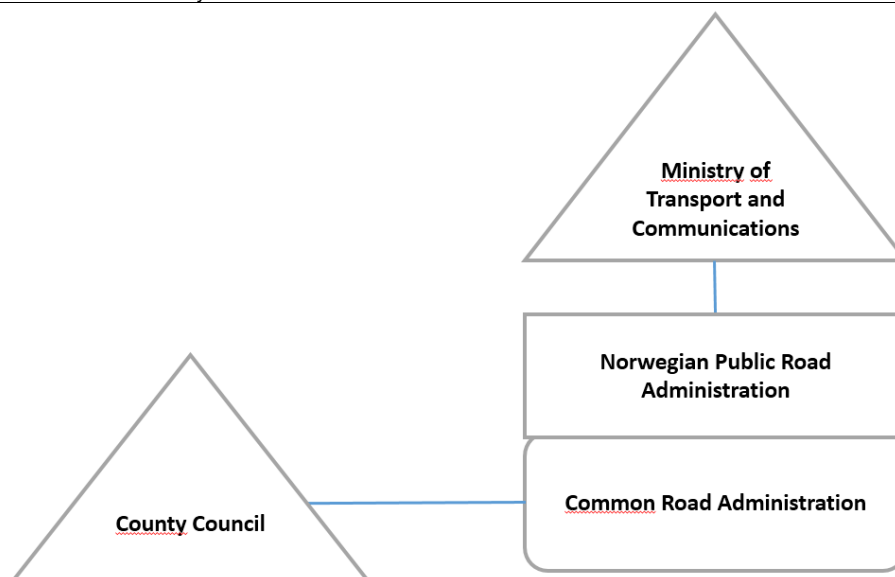
Small municipalities usually organise their park services in the traditional way, i.e., administration and operation are included in the same entity internally in the municipality.

4.3.7 Organisation of road services

There are national, regional (i.e. county) and local road responsibilities in Norway. Since the delegation of 80 percent of the national road network, including ferries, to the regional level on the 1st of January 2010, the regional level is the largest road owner.

Since the introduction of the Road Act in 1963, there has been a common administration of national and regional roads in Norway. Organisationally this common road administration is part of the Norwegian Public Roads Administration. In practice, this means that the Chief Regional Road Officer is head of the road administration for the national government in national road issues as well as for counties in regional road issues. Both the county and the national government therefore use services from the common road administration (see Figure 6).

Figure 6.
Common Road Administration in Norway



(Source: Leiren and Krogstad 2014)

Prior to the implementation of the decentralization reform in 2010, the Norwegian Public Roads Administration was responsible for implementing regional road tasks. Existing legislation, guidelines and handbooks provided the delegation of national and regional road responsibilities to the Norwegian Public Roads Administration. Some counties had additional or separate frameworks

and yearly supply agreements with the Norwegian Public Roads Administration, but this was not common.

During the policy process of the decentralization reform, there was a discussion about transferring the road administrative tasks to the new regions or counties. However, the argument that fragmentation of the professional road knowledge would weaken the road competence made the political majority reject this proposal (White Paper no 12, 2006-2007: 44-45). The common road administration remained. Therefore, the reform is mainly a political decentralization reform and not so much an administrative reform. Nevertheless, the combination of increased regional responsibilities and the common road administration provided different opportunities as to how to organise regional transport policies.

Two key organizational solutions characterize the implementation of the reform: Only one county (Nordland) has adopted an integrated model; the other counties have chosen a procurement model. In the *integrated solution* in Nordland, the Chief Regional Road Officer is part of the county administration. He has the same duties and authority as the other heads of department in the county. In terms of authority, he is equal to the Chief Transport Officer in the county administration. It means that the Norwegian Public Roads Administration carries out procedures on behalf of the county and has to ensure political clarifications itself – and does not leave such clarification to the transport department of the county (as in other counties).

In contrast, the *procurement model* includes four key horizontal governance channels (Evaluation Group 2013): (1) transport plans with a ten-year perspective including a four-year action plan for the regional roads; (2) a financial plan and budget for several years; (3) a framework agreement between the county administration and the Norwegian Public Roads Administration, including general conditions, division of roles, reporting procedures and rules for deviation; and (4) a yearly supply agreement between the county administration and the Norwegian Public Roads Administration, which includes activities and resources, budget for investments and maintenance as well as a specified planning program.

Among the counties that have adopted the procurement model, the extent of delegation to the common public road administration varies: some have taken larger steps in increasing the road competence within their own organisation (Evaluation Group 2013). A majority of the framework agreements follow a common template. Commonalities of the delegation to the Norwegian Public Roads Administration include case treatment, participation in administrative and political processes, investigation and preparations of proposals of strategic documents (e.g. regional plans), action

programmes for regional roads, budgets and financial plans for regional roads, implementation and financial reports, planning and implementation of construction, operation and maintenance as well as continuously providing information. Some counties mention particular plans such as for bikes. Some of the plans follow a 'negative principle of delegation, which means that if a responsibility has not been mentioned in the agreement, it is usually delegated to the Norwegian Public Roads Administration.

On behalf of the counties and the national government, the Norwegian Public Roads Administration outsources the maintenance and construction tasks to private entrepreneurs, who compete for tasks via procedures of competition. This has been practiced since the 1st of January 2003, when the national government outsourced the Norwegian Public Roads Administration's production operations and established the state-owned shareholding company, Mesta AS. Prior to this outsourcing, the Norwegian Public Roads Administration carried out operational tasks itself.

While there is considerable knowledge about how road services are organised at the regional level, there is a lack of such knowledge of local road services. In contrast to the counties, the Norwegian municipalities do not make use of the common road administration; rather they are in charge of the administration of their own services.

There are three key organisational forms of local road responsibilities: municipal undertaking, internal operation or outsourcing to private entrepreneurs. The majority of small municipalities have internal operation. One informant argues that this is because small municipalities more easily have a full overview. However, organisational form is also dependent on the political constellations, where left-wing local governments tend to have internal operation more often than right-wing governments. The same informant is of the opinion that it makes more sense to operate such services internally in the municipality rather than outsource it, because there is no income on maintenance of roads, only costs. Another benefit is that the controllers or inspectors themselves can carry out tasks, when they discover that something is wrong (e.g., removing leafs and mend holes in roads). It creates less administration than having to go via external entrepreneurs and give them penalties.

However, maintenance of roads during winter is often too extensive for a municipality to carry out by itself. Typically, municipalities therefore outsource such winter services to private operators. When such contracts are above the threshold in the Public Procurement Act, they initiate competitive tendering processes. Traditionally farmers carried out some cleaning of roads. Today

the tasks tend to be bigger and given to small, local enterprises, who may in some cases use farmers.

The development towards increasing outsourcing of local road responsibilities started early in the 21st century, in particular after the national government decided to separate the production services of the Norwegian Public Road Administration and establish Mesta AS. This created a spur to do the same among municipalities. For example, Oslo established the company Oslo Veg AS ('Oslo Road') as an entrepreneur on the 4th of April 2001. This company represented a 'continuation' of a department in the city with a history of 150 years. This department was responsible for contractor services, service and maintenance operations, crushed stone and asphalt production as well as authorised repair shop services. The aim of this outsourcing was to make the service production more flexible and increase efficiency by means of competition. However, Oslo Road went bankrupt on the 7th of December 2012. It was one among several entrepreneurs with contracts with Oslo. Oslo had to put in place emergency contracts with other entrepreneurs over night, when it occurred and these contracts were not cheap.

4.3.7.1 *Different governance models in the 'green' and 'black' area*

Based on the descriptions above, there seem to be in particular three relevant governance models:

1. A political entity – with an administrative procurement agency – and delegation of tasks to entrepreneurs either via:
 - a. competitive tendering
 - b. negotiations
2. A political entity – which delegates production tasks to entrepreneurs either via
 - a. competitive tendering
 - b. negotiations
3. A political entity which carries out the production tasks itself

None of the informants is aware of any inter-municipal companies or inter-municipal cooperation in this field; nor does existing literature on such organisational forms mention roads or parks specifically. In such research reports, the labels of policy areas are at a higher level, for example it

could be that roads are part of ‘technical services’ in such studies. We therefore do not know whether such organisational forms exist within the policy areas of parks and roads in Norway.

The governance structures in the models mentioned above are either hierarchical or horizontal. The lines (–) illustrate the horizontal chains of contracts between the different responsible entities. In the third model of internal operation, the governance structure is hierarchical.

The administrative procurement agency and/or the entrepreneurs may be organised as shareholding companies or as municipal undertakings. It means that the political body may steer in terms of being owners as well as being procurers (Leiren et al., 2014). When the shares of shareholding companies are in public hands, the board of such companies may consist of professional and/or political representatives. Political influence as owners occurs via the general assembly. The ability of politicians to steer a municipal undertaking is somewhat larger than steering a shareholding company. In a municipal undertaking, the ownership steering occurs via a council.

4.3.7.2 Horizontal governance structures: contracts and the development of contracts

In the context of horizontal governance, including public and the private actors, state control is not direct but indirect via an agreement or contract. The contracts may be more or less specified in terms of what the operators are supposed to do (e.g., cut the grass, keep the parks and streets clean, empty garbage bins, put gravel or salt on winter roads). When a municipality launches a new call for proposals, it typically makes use of existing contracts and then try to improve it, asking questions like, ‘What do we want the new contract to provide us with?’ The civil servants may look to contracts in other areas to see if there is something, they can learn from them.

The informants mention three key aspects related to contract formulation. One issue is about the duration of contracts. In Kvinnherad and Oslo the duration of the contracts is four years. If they are shorter, they have an option for an extension. Duration is important as it says something about the ability or willingness of the contractor to for example, invest in the necessary equipment. It might be willing to make larger investments if the contract period is long.

Another question is the size of the contracts. Contract size is important as it affects the number of companies that are able to attend a competition and therefore the price level. Small companies are not be able to join a competition, where the contracts are too large. Currently there is a discussion in Oslo whether the contracts are too large. However, so far the competition has worked

well. According to the informant, the contractors have ‘stretched’ far in order to win, but some big companies have been more successful than others.

A third issue is about how much risk the municipality should take: whether the risk should be placed in the hands of the municipality or the contractor. For example, it is always uncertain whether there will be a lot of snow in winter. If the contractor gets paid for snow removal, and there is no snow, the municipality pays for services that are not carried out.

4.3.7.3 Democratic accountability

As mentioned, in the context of horizontal governance, political steering may be indirect. One informant argues that the politicians are not involved in designing contracts. However, the politicians make the budget and the administration has developed standards, which shows the politicians what they get for how much. There is also extensive political guidance. Sometimes there is too much such guidance, according to one informant, because the administration may see the need for increased maintenance of roads (i.e., there is a large back-log on roads), while the politicians may be more interested in operational tasks such as ensuring that the streets are clean.

A search on the internet suggests that a number of municipalities have a web page, where citizens can report to the municipality that in their neighbourhood there is a hole in the road, lack of snow removal, needs for trimming the edges and so on. In many cases local newspapers also play a role in such reporting. Oslo has also developed an application, where people can leave messages behind. Last year Oslo received about 20,000 inquiries, but some of the inquiries are reports about the same case.

4.3.7.4 Control of contractors

While all municipalities have a road inspector, a consequence of the increasing use of private entrepreneurs is that the municipalities increase their controlling tasks. Oslo has 12-13 control engineers, who ensure that the contractors implement and adhere to the contracts. Contract breaches are punished with penalties. Oslo also arranges meetings with the contractors every 14 days, where they go through what has to be done.

4.3.7.5 *Complexity and competence*

According to one informant, it is a concern that several municipal administrations do not have the necessary procurement competence. It relates to the complexity of regulations. One informant argues, ‘The acquisition rules are rigid and difficult. Among the entrepreneurs, only the big, heavy construction companies have the necessary expertise and the resources. The regulations are “tiring” for the public administration as well.’ Another informant describes an administration that closely collaborates with lawyers, when working on the requirements in the contracts. In Oslo there are examples of litigation, where the private entrepreneur and the municipality have met in Court. Such cases have been related to the acquisition process, i.e., an entrepreneur has been disqualified to join the competition.

The issue of competence relates not only to complex regulations, but also operational knowledge. On the one hand, several of the informants argue that when the operational tasks are in the hands of the municipality, the ‘ownership’ of the area is larger. In contrast, a result of outsourcing is that the specialist environment in the public administration is damaged. In their view, even if standards exist, lacking operational knowledge makes it difficult to design good programmes and contracts. The actors on the other side of the table have a lot more training. Without the necessary competence procurements may end up being very expensive, even without improved quality. One informant argues that this is particularly clear when it comes to additional or unexpected events, where private entrepreneurs charge much higher prices than for the ordinary services that are included in the contracts. The private entrepreneurs are considered powerful in such negotiations. Another informant argues that this is a question of how much risk the municipality is willing to and can afford to take in contracts. Another argues that it is crucial to keep a competent administration within the municipality with employees, who can take care of extra-ordinary events themselves, without having to go via contract partners.

Informants also argue that if the procurement body is competent, outsourcing and competitive tendering may work well. It depends on the parameters in addition to price level that are included in the contracts, e.g., environmental aspects and type of equipment.

4.4 The United Kingdom

Section written by Johanna Selin

4.4.1 Introduction

There have been many different models of public procurement in England and hence England has come to be a benchmarking country for innovative ways of organizing this aspect. As one of the countries most dedicated to the New Public Management regime, the country did challenge the traditional model of public administration early on by market-oriented systems for the handling of public services. The local authorities have since the 1970s and the Thatcher government, been an arena for experimentation of this neo-liberal ideology.

The relation between local and central government is also one marked by a special and somewhat tense relation that has its roots in the Victorian era. In England, as a contrast to many of its European neighbours, central government is interfering with the business of local government to a great extent. Even after many years talk about localism and decentralization, the power is still highly centralized.

The picture is further complicated by the fact that the organization of the local level in itself is acknowledged to be complex and fairly messy. Since the 1990s reorganizations of local government has been conducted a couple of times to make it easier to grasp but also to function more efficient and better. This complexity does make it difficult to unravel where responsibilities lay. During my time working with this report, I have found it hard to get a clear picture of the ways things are appointed and which regulations and/or incentives that have been the valid ones.

One thing that can be stated is that the different shapes of public procurement that the country has tried, has left marks in the public sector. The starting point was the Compulsory Competitive Tendering under Thatcher, with consequences of diminishing transparency in local political procedures, a rise in unemployment for public service workers and a great change in the organization of public services affected. A lot of this changed under the New Labour Party, but the route towards managerial models instead of bureaucracy remained, even if it now was called Best Value System. The development has continued with more new ways for arranging public sector. Central government has been pushing local authorities to involve private actors and continue the use of competition as a mechanism for cutting costs and improving quality. Focus has now developed

into public tendering through partnerships and private finance initiatives. There might even be indications on an entirely new approach to partnership and an in-sight into the importance of the relational aspects when working in these constellations. As such, it seems that England will continue to try and develop new ways of using public tendering in public sector.

4.4.2 Marketization and local government organization in the UK

There is this notion that New Public Management was “born” in the UK. If not thoroughly true at least the NPM model is one significant element of the so-called marketization trend shaping the UK, as well as other Western countries. This concept is founded on the public choice theory where the problem is bureaucracy and the solution is competitive pressure. That public organisations and authorities shall operate as market-oriented companies cause to reconstructions of the public sector and leads to new forms for organizing the state to develop. As mentioned in the introduction, the UK is viewed as a benchmark when it comes to different ways of engage private actors in carrying out public services. The country was one of the earliest ones rearranging the public sector according to ideology of marketization, spurred on by the Thatcher government.

The UK has an old model for governing, it goes back to the 17th century, but they do not have a written constitution, as for example Sweden does. Theoretically this means that the parliament is able to decide on whatever they want to. Not being the actual case, parliament has a number of regulations of historical significance regulating this possibility. The constitution is therefore flexible, easily changed when needed, which is a quality looked upon with a sense of pride.

The UK has a parliamentary government with the parliament consisting of two houses, the House of Lords, made up of 749 members who are appointed, and the House of Commons with its 659 members of parliament, also called MPs. These are elected directly and each MP representing one specific area of the country. The party with a majority of MPs in the Commons will form the government. Head of government is the prime minister, today, the leader of the conservative party, namely David Cameron. It is he how forms the government by choosing ministers from both Houses. The Crown, or monarchy, still plays a part, if so today a more ceremonial one, but is a part of the parliament (Parliament, 2014).

The arrangement of the executive is based on the Westminster model, a most traditional model. It is best described as a top-down model where central government is the quintessence of governing, uniting the country as a whole (Richards, 2011:30-31). This model has been, and is being, challenged. With a growing regionalist notion the unifying role is under pressure,

fragmentation of public service into private and voluntary approaches is seen as a sign of the diminishing ability of the central state and even the public ethos itself is questioned by the new managerial forms introduced in the country. These reforms, meaning to rearrange the way public sector works, to achieve better quality, a more efficient governing and smaller public spending could be described as governance. There is no longer one actor to decide the shape and form of public sector, there are many, where central government is just one of them. Which results in new ways of organizing public sector, based on principles of networks and markets (ibid., 2011:31-32).

4.4.3 Marketization

The influence of marketization on the UK policies and politics has been huge. The UK is in many ways a benchmarking country when it comes to trying out and developing new forms for arranging public services. Taking off under the Thatcher era with the introduction of Compulsory Competitive Tendering, a wish to minimize and create a more efficient public sector, to today's central concept strategic commissioning and the encouragement of partnerships of different kinds. It is a development from the traditional contracting-out with one commissioner and many possible contractors, to a more collaborative way of working and a more complex procurement process (Bovaird, 2006).

During the 1980's, the essentials of marketization were an almost overall conviction. The New Right Agenda was gaining ground and in 1979 Margret Thatcher became prime minister. New Public Management (NPM) is one of the more famous descriptions of the different reforms and changes made to public sectors. Its neoclassical notion originates from the theories of public choice and rational choice that sees the bureaucratic model as wasteful and as such has to be cured with competition and performance measurements.

In the beginning of the 1970, Europe experienced an economic crisis, affecting the financial situation in many European countries. In the UK, decreasing public sector seemed a necessity to modernize and stabilize the country. The public sector was considered too big and too inefficient and to make public sector more cost-efficient, competition on a market was seen as the way to improve and cut expenditures for public sector deliverance. It does not matter who is delivering the service; private, public, third sector, as long as the selection has been done through competition on a market (Boyne 1998). NPM replaced the traditional bureaucratic form for public administration and was followed by privatisations and the introduction of new models for arranging government and its

services. To make public services more efficient and accountable were the leading words and motivated the reorganisation of public administration (Gill-McLure, 2013; Kuhlman, 2010). A great confidence in the market as the best problem solver was at the core for the government and it changed the way the country was organized and how the public services should be carried out (Boyne, 1998). To push especially local government towards embracing more private actors on the public service arena was a question of priority for the Thatcher government (Painter, 1991). There was also an aim to increase central control over the actions of local government as a way to minimize the risk of challenging agendas from the left. The now famous quotation from Nicholas Ridley, then Environment Secretary, illustrates this:

"The root cause of rotten local services lies in the grip which local government unions have over those services in many parts of the country. ... Our competitive tendering provisions will smash that grip once and for all. The consumer will get better quality services at lower cost" (Local Government Chronicle 4 April 1989, p. 1).

When the Labour party under Tony Blair took the power there was a change in the way public sector was described, it was to be modernized and instead of focusing on only efficiency there would be a move towards quality instead. Their aim was to soften the regulations of market principles and the great influence of central government on local authorities and reform the way public sector was to be organized. It is possible to argue that the shift to the subject of securing "best value" instead of efficiency through competition did not mean a shift from the NPM tendency nor did the influence from central government over local authorities decline. It did only pose a different way of conceptualizing marketization and the neo-classical economic ways of viewing government and public sector. The use of performance targets and monitoring of these was developed as a tool for delivering the best service and the service the people actually wanted. Public procurement took a more partnership kind of look where collaboration was a key word (Bovaird, 2006). The Blair government has since then been accused of doing the opposite to strengthen local government and instead accumulate power in central government. His successor, Gordon Brown, was on the other hand seen as too weak as a leader and his government did neither relocate power outside government or increase spending on public sector (Richards, 2011:39).

The Coalition government that runs the country since 2010 have made severe cuts in public sector, the most significant ones since 1945 (Cowley, Hay & Heffernan, 2010:3). After the

economic crises in 2008 minimizing public expenditures has been seen as a solution to the country's situation. At the same time the Coalition has continued and intensified the softer approach in the aspects of decentralization and localism. Their strategy included put an end to what they called Labour's "big government" behavior where the state centralized more and more power, interfering on all levels of government. The Coalition saw this as one reason for diminishing quality, and inefficient organization, of public services. Instead, they established the concept of "Big Society" which meant a more direct influence on the shaping of society from the people affected and a greater permission to organize public sector with the help from not only public sector actors.

Give the power back to the people has been their choice of words and democracy rather than bureaucracy (Richards, 2011:46). Meaning a greater involvement of third and private sector, which hitherto, leads to a bigger freedom to organize society as suitable and in best possible way. By giving away some of the central control, the Coalition are aiming to reduce government spending and the size of the public sector. The rise of the Coalition itself is something unusual for the UK, as the common way is a government with at party in majority. The collaboration between Conservatives and Liberal Democrats and the creation of a hung parliament, is also seen by some as another indication on how the Westminster model is challenge (Cowley, Hay & Heffernan, 2011:1). As for today the neo-liberal agenda is still vivid and this discourse affects the changes and policies the government presents. One of the most important components of public service deliverance and also in managing this sector is the local governments (McEldowney, 2003). This leads to an interesting situation because it is today seen as a cornerstone for a well-functioning state and something essential to have a strong local government where decision-making is decentralised. At the same time many countries are following a neo-liberal discourse, which are questioning this notion. (Kuhlman, 2010) And the UK, in great contrast with many of the other OECD-countries, is a country that has a considerable central dominance over the whereabouts of the local governments. Even after the Coalition's admittance and effort to lower this sort of interference, the UK still stands out when it comes to the possible ways of self-governing on the local level.

4.4.4 Local government

The way local government looks shows a great variation. The UK consists of the national government in Westminster but do also have devolved governments in Scotland, Northern Ireland

and Wales. Together with England these are the four countries of the UK. As this report mainly covers England this area will be the one presented. The local level is today organized in 56 unitary authorities, 36 metropolitan districts and 27 shire counties split into 201 (non-metropolitan) districts, as well as Greater London. The counties are two-tier administrative bodies and consist of the non-metropolitan districts as the lower-tier area. The functions are divided between the two levels, as is the most suitable for them and also the most efficient. In the 1990's the unitary authorities were introduced. They are single-tier authorities and have all the responsibilities associated with local government. The metropolitan district councils were until 1986 sub-ordinated a metropolitan county council, which since then are abolished. They are single-tier counties with the same responsibilities as their district equivalents. London is two-tier council of its own, consisting of 32 boroughs and they have the same status, more or less, as the metropolitan districts (Office for National Statistics, 2014).

Local governments are responsible for a variety of services, both through in-house management but also indirectly by contracting out. The two-tier system is the most common one in England and the county councils and district councils are responsible for carrying out different tasks. County councils have responsibility for education, transport, planning and social care. District councils care for rubbish collection, local highways as well as Council Tax collections. Unitary councils carry out all of the above by themselves. There is a third tier; the parishes and these are the very most local level in England. As such they used to be very important in local government but today their influence is limited. They range from very small ones to up to thousands of people and are responsible for services such as cemeteries, open spaces, playgrounds and war. In 2013 there were 10,501 parishes in England (Office for National Statistics, 2014).

Local government spending is financed by central government grants and non-domestic rates and locally raised council tax, and also borrowing. Not all local governments are allowed to collect money through council tax, out of 444 local authorities, 326 are so called billing authorities. The year 2011-2012, local government expenditure was 23 % of total public sector's expenditure. In England there has been a decrease from £172bn in 2010-2011 to £162bn in 2011-2012. The income to local government derives from 63 % central government, of which 55 % was government grants. 37 % was local sources, where 26 % came from local taxes (Department of Communities and Local Government, 2013).

As from 2010 there is new fiscal policy framework aiming to create sustainable public finances and by that make a balanced budget. To achieve this scaling down the public sector

borrowing is acquired, which will be done by reduce public spending, rather than raising taxes. In numbers it is equal to a decrease of 26 % per year in government funding to local authorities (Department of Communities and Local Government, 2013).

The government has a department named the Department for Communities and Local Government (DCLG) and one of their main tasks is to act in a way that will support the local governments. Their aim is to make them stronger and more united, enabling them to act on their own to solve problems. Thereby give more power to local people and without any intrusion from central government (Department of Communities and Local Government, 2014). Another public body with great relevance for local government is the Audit Commission, with which DCLG has a close collaboration. It is the Audit Commission that follows up on local governments public spending and makes controls of its use. It has been one agency of significance for local government and was created in 1982, at the same time as the Local Government Act of that year was decided. This act would over all play an important role in the development of the local level and the role of public tendering.

4.4.5 Central vs. local government

The relation between central and local government has for an extended period of time been somewhat of an issue. The UK has a lengthy history of a strong and decentralized local government, derived from the medieval times, but in modern times' central government has, to a greater extent than other European countries, gotten itself involved in the whereabouts of the local level. This trend grew stronger after WWII, during the creation of the welfare state and with the nationalization of local government functions (McEldowney, 2003) to make them a part of central governments agenda. The intervention picked up speed even more speed during Thatcher (Kuhlman, 2010). Local government came to be "hollowed out" as some researchers put it (Kuhlman, 2010), meaning that democratically chosen and locally responsible forces was replaced by central actors and NGOs as well as private elements. (Kuhlman, 2010) This was meant to restrict public expenditure, all symptomatic with marketization. The Thatcher government did also put harder constraints on local government budgets and overshoots was punished with poorer interest before the next round of grants. By stripping away a lot of the responsibilities that traditionally had been local government tasks, it was easier for the Thatcher government to oversee the labour movements' actions and block its gained influence in politics (Painter, 1991; Gill-McLure 2014).

Substantial interference and aims to control local government from a central point of view has been made, hence there has been reforms and regulations to maintain this sort of jurisdiction. As a consequence the organisation of local government itself has grown more and more complex and new ways for management of local level has been pointed out with every other central government (McEldowney, 2003). Thus, when Tony Blair and his New Labour won the elections in 1997, they also had an idea on how to organise the local level. The Thatcher regime's intervention has caused a great split in local government as a result of the managerial reform to privatise of the public sector and put its services out to tendering. Labour wanted to soften the tough demands on tendering local public service and instead of focusing on efficiency and economic aspects, there was to be a shift towards quality and in creating the greatest value. A diminished central control and more power transferred back to local government were also announced, devolution and decentralisation was a part of the political agenda. Even so, the overall course of the Labour party did not deviate from the Conservative agenda. The grip on local government did in some ways loosen but instead came the introduction of auditing regimes, central regulation and demands on meeting centrally set performance indicators (McEldowney, 2003).

The Coalition has focused on changing the local level by public pressure. The wishes and demands of the people should govern the way local authorities organize services. This way more voluntary actors might be engaged in carrying out public services as well as a bigger part will be handled by private actors, something that would save money and shrink the public expenditures and the public sector as a whole. The Coalition was very critical towards the Labour Party's, as they saw it, centralism, which the Coalition connected with a bigger, heavier, and more expansive bureaucracy. Decentralisation and democratisation would take care of this, empower the local level and thus shrink public sector (Richards, 2011:29-50).

All of these reforms have meant great changes to local government and the management focus, instead of focus on deliverance and bureaucracy, has made the way local government is suppose to function, even more complex.

4.4.6 Public procurement in the UK

The process of public procurement usually follows three phases: planning which goods/services to be bought and when, choosing who to be the contracting partner and the terms for deliverance and also the administration of the contract to make sure it is a effective performance (Arrowsmith, 2010). The objectives for using public procurement do differ some from one country to another, but

are in general mostly generic. The difference lay more in how important each of these aspects is seen. Accountability, value for money, fair treatment of providers and equal pre-conditions are some of these objectives (Arrowsmith, 2010), all of which are recognisable for the UK case.⁴⁸ The look of public procurement has developed and has taken new forms in later years. Bovaird (2006) points out four different forms of contracting-out, found in the UK today. Besides the traditional form of public procurement, he describes partnership procurement, distributed commissioning and relational procurement as important and all having some sort of collaborative relationship to them. Office of Government Commerce is responsible for procurement policy in the UK. Before 2014 the Department of Local Government handled the question of procurement for the local level but have now merged together with the Office of Government Commerce. The legal framework public tendering is in the UK handled by ordinary private courts, no special institution is responsible for these kinds of questions.

The EU Directive 2004/18/EC is the main supra national level regulation. In the UK this one is implemented in the SI 2006 No.5 for England and Wales and Northern Ireland and SSI 2012 No.88 for Scotland. The public procurement regulation is only relevant for contracts above the threshold set by the EU. The more general treaties regulate contracts below threshold. This includes services categorized as Part B services. These are not fully covered by the Directive and therefore less regulated. Examples of Part B services are hotel and restaurant services, health and social services and educational services. Part A services, viewed as priority services, include architectural planning of different kinds and accounting services and building-cleaning services.

A change in the procurement directives has been up to discussion and 17th of April 2014, the new EU Procurement Directives were announced as adopted on the EU level. The Directive is expected to be implemented by the member states within two years and is in the UK looked positively upon. Among things that have changed is regulation for helping small and medium enterprises to attend the procurement process. This has been a question of great interest for the British and the country is planning to implement the new Directives for almost all procurements and hopefully before the two years limit (Cabinet Office, 2014).

⁴⁸ For experiences and approaches of specific national and international systems to framework agreements see, in particular, S. Arrowsmith, "Methods for purchasing on-going requirements: the system of framework agreements and dynamic purchasing systems under the EC Directives and UK procurement regulations", Ch. 3 in S. Arrowsmith (ed.)

Even so, before the requirements of the European Union procurement law, the United Kingdom relayed mainly on guidelines and administrative briefings rather than laws and mandatory regulations for aspects of public tendering. Instead the use of public procurement was to a great extent, interpreted by the organizations themselves. The commitment to the EU Directive is today only confined to rules and laws clearly stated in the directive. Other aspects are left outside (Arrowsmith, 2010).

4.4.7 Public tendering and its different forms

A total of 24 % of local government expenditure went to external contractors between the years 2011-2012. In numbers that is £57.6bn on procurement of goods and services and out of that £27.7bn was paid to external contractors. 1,67m people work for local government, making them one of the largest employers in England. Most of these are found in administration and other support services. 48 % of the total government service expenditure goes to employees (DCLG, 2013).

During the Thatcher government the neo-liberal ideas made great impact on how the public sector was perceived and profoundly influenced how local government were supposed to organise public service. The focus on keeping public expenditures low and at the same time broaden the control over in what way local authorities used their resources, was legitimized by this right wing ideology and general acceptance for marketization. A part of this was the Thatcher government's view of private actors in public sector as a key to big financial saving and therefore it wished to expand the amount of private actors in the public sector. As an extension of this Compulsory Competitive Tendering (CCT) was introduced and was more or less made mandatory for local government to abide. There never really was a choice whether to commence this form of tendering (Patterson & Pinch, 1995; Boyne, 1998).

4.4.7.1 Competitive compulsory tendering (CCT)

CCT was first presented in the 1980 Local Government, Planning and Land Act. It was stated that construction and maintenance work had to be put out for tendering and in the 1988 Local Government Act a widening was decided to include more services. Competition would shrink the public sector and hinder local governments to spend too much on public services, all in line with existing government opinions. Services to be included in 1988 Local Government Act were, among

other things, cleaning of streets and buildings and ground maintenance. There was also a goal of a 100 % competitive tendering in year 1994, when all activities defined by the act had to be open to private interest (Clark, 1997). The requirements put on public bodies were strict and demanded a business-like behaviour, 6 % rate of return and forbid an anti-competitive manner. This was not demanded of private actors and therefore did it become a disadvantage for public actors. The process of CCT meant a lot of aspects for public sector to take into account, specifications to consider when creating the contracts, requirements on how the in-house organisation was supposed to act for not being accused of anti-competitive behaviour. There were also different steps in the tendering process local authorities had to follow.

The effects of CCT turned out to be substantial. The most obvious consequence was the hard split in the local council's organisation between the so-called client and contractor side. This split is still present in the today management of public services. A separation of these two was encouraged to avoid biased choices being made in the competition for tendering contracts (Clark, 1997) The manual service, before managed in a traditional way, was transferred to a Direct Service Organisation (DSO). They in turn had a client side, responsible for supervising and managing contracts and a contractor side, the ones performing the actual work. The DSO had to compete like any other company to win the contract. If not winning, the consequence for the in-house group was to stop exists being. There was no other place to go so they more or less only had one shot (Patterson & Pinch, 1995).

The separation between client side and contractor side led to a feeling of the client side watching over the contractors and the contractors felt mistrusted be the new management people in the office. The fact that local government had to create contracts for areas for which they did not have experience to do so, added up to the complications of CCT. Many workers felt a loss of autonomy, their skill and knowledge was of no use, as a cause of rigorous ways of managing the work tasks.

The strict demands on local government under CCT was criticised for making it to hard operating in local authorities. Less transparency and a diminishing democratic influence from the locally elected and the local people was also one thing noticed during the years of CCT. It was also possible to observe that during first round of CCT, a majority of the contracts were won in-house. Even so, this has been as a result of budget cuts in the local organisation, a lot of people have been redundant and lower wages been offered as a mean to compete with private contractors. There are statistics talking about an almost 20 % job loss between the years 1988-1991 within public sector.

Indications on generally worse working conditions have been seen and older staff has been replaced by younger personnel because of difficulties with handling the new ways of organize working schemes and the pressure it led to. (Patterson & Pinch, 1995). The picture is not homogenous and the effects of CCT are hard to measure. There is evidence on reductions in expenditure, and really no greater effect on quality and in some services (Boyne, 1998) the workforce has even described a growing feeling of autonomy than before (Patterson & Pinch, 1995). Even so, CCT was greatly criticised and when Labour took power in 1997, the system was abolished. It was replaced with Best Value system, quality instead of efficiency and performance instead of results were to be the new ways for local government.

4.4.7.2 *Best Value – quality instead of economy*

The Labour government criticised CCT for being non-flexible, creating unnecessary bureaucracy, forgetting the aspects of quality and instead putting too much focus on competition and efficiency and with that generate tough situations for employees and employers. In 1999 Local Government Act, CCT was abolished and it was no longer mandatory to tender out local services. Instead the system of Best Value was introduced to improve local public services, which was built on national performance targets (McAdam & Rodney, 2003). The Audit Commission was responsible for implementing the process of BV. BV is exercised as different kinds of models, some more common than others.

Labour stated early on that quality was to be the main goal and both public and private actors should be a part of delivering public services as long as it was done with the highest quality – “what matters is what works”. Partnership was stressed as crucial and also empowering local taxpayers possibilities to have a say about the service deliverance – a greater democratisation of local government was going to take place. The Best Value system was the solution. The thought behind best value was to ensure that taxpayers and local people were provided with the most efficient, effective and economically best service and the principles behind Best Value stated both quality and cost as equally significant. Even if it was not compulsory to put services out to tender, competition was highly regarded as a key tool. Creating targets aiming at highest quality and with the local people and taxpayers wishes in mind, was seen as a cornerstone in the Best Value system. It was of utterly importance that the local authorities, on a continually basis, reported targets reached and how the performances were met. A wide array of different sorts of performances, targets, and plans was called on to be made, followed and be followed up upon. The system also demanded

continuous improvement within these performances (Consultation Paper Best Value, 1998). Auditors were put in use to publicly put out information on how local government fulfilled their goals and local government had to publish reports on how they met performances. The targets and indicators used to measure included both the local view but were very much based on criteria created by the central government. All of these were parts of the Labour government's regime to modernize and improve local government and its functions. Best value was replaced in 2002/2003 with the Comprehensive Performance Assessment (CPA) in both England and Wales (Gill-McLure, 2013).

The Labour government did change how both local and central government was functioning. In some ways it was a softer approach that was presented, less financial constraints on local government, more possibilities to decided on whether put out to tender or not, and central government put on the roll of being more strategic and working to encourage localism. On the other hand has there been little change in decreasing the centralization of policy-making and really spend more on public sector. McEldowney (2003) describes it as a wish to make local government become more accountable, looking more and more alike and through that become easier to measure and compare. Even though tendering no longer is compulsory, contracting out is still very much looked upon, and used, as a good option for organizing local service. All the different programs and models in the Best Value regime tried to change the course of the Thatcher government but it was not always adapted to complex reality of public service. Many times these centrally controlled performance indicators meant a heavier workload on local government (Kuhlman, 2010).

4.4.7.3 PFI/PPP

As a further strategy to improve public service and as the Government described it then: "The Government's objective is to deliver world class public service" (HM Treasury, 2003) more money was to be spent and to be able to do this, new forms of investments was encouraged. Private Finance Initiative (PFI) and Public Private Partnership (PPP) were two forms of particular interest for the Labour government. It meant that private actors where to finance local projects and also collaborate with public actors and thus be taking the risk of investment. It was suppose to happen where it meant value for money. PPP is used when there is collaboration between public and private, and sometimes also third, sector organizations in carrying out public services. PFI is more of a financially driven kind of collaboration where the private actor takes on all, or almost all, the

funding of a project for a service the government wish to carry out but do not want to take the risk for (Arrowsmith, 2010).

It is important to separate PFI and PPP from the strict meaning of privatisation and outsourcing. Privatisation suggests a situation where a private actor has wholly responsibility for providing the service and is free to make arrangements of their own liking. To contract something out means that a service, before provided by public sector, now is carried out by a private actor but with the government still in charge of the finances. Private finance initiative places itself between these two (Arrowsmith, 2010).

It is a sort of development of contracting out, creating partnerships between public sector clients and private contractors. Both PFI/PPP and public procurement was promoted as important tools for creating good public service during the Labour government and still are under the Coalition. This is an illustration of the continued influence from new public management on public organization and how it has changed the way it is carried out and who is responsible for what. The governing trend since Thatcher has lead to a stripping of local government their traditional tasks and these have been, through the marketization of public sector, transferred to central agencies and so-called quasi non-governmental organisations. Managing by competitive tendering has affected around 300,000 public jobs and women are among workers most gravely affected. (Kuhlman, 2010)

The shifts in forms of management and organisation of public service on a local level, has developed new ways for how public procurement works and looks like. The more traditional form during CCT has now become more complex with more actors involved and a partnership-way of thinking (Bovaird, 2006).

4.4.7.4 Strategic commissioning

Today is strategic commissioning the model for how public sector should act to improve its services. It is widely popular and it has been a concept quickly taken in, in both central and local government. Almost a discourse, it is being found everywhere in public services. Nevertheless the definition is blurry. Commissioning something can be translated to the public procurement process under CCT but the strategic commissioning covers more than just the actual commission, more than placing of an order. It's the whole process of recognizing what is needed in an area and what people want and then make a plan that in the best of ways ensures this to happen, it is more about the

overall picture. Such a big task puts pressure on local government authorities to be good at designing this in an efficient way. As a consequence of the blurry meaning and the wide area it covers, there has been a great deal of variation in how it is perceived and converted to practice (Bovaird et al, 2014).

The sort of freedom strategic commissioning suggests for local authorities ways of organizing its services is also a sort of challenge to the picture of the otherwise power hording central government. With such a big emphases on the people when designing public service deliverance, many forms of strategic commissioning has lead a sort of bottom-up organization. The whole picture approach is also something different in comparison with the traditional form of public procurement and there has also been a move towards greater externalisation of public services under the later years of strategic commissioning. This is a result of the pressure to create partnerships and mutual agreements with private actors. As a consequence there is now a great experimentation of new forms for public procurement and deliverance of public services going on. (Bovaird et al, 2014).

Two public services areas that has been in the interest of public tendering almost since the beginning, is park and road maintenance. Park and open spaces has for a long time been a local concern whilst roads is divided into highways managed by the government and local road nets handle by the local authority.

4.4.8 Park and road maintenance

Road and park maintenance are two different administrative fields. There seems to be no or nearly no responsibility on central government level for the question of parks and open spaces. It comes across as an area where local councils have full ownership. Roads on the other hand is an infrastructure question, and as such of big interest to the government. This might be why it has been easier to find regulations on this area than it is for parks and open spaces.

Both the road and park sectors have challenges ahead. A report from the Local Government Association in September this year forecasts a 42 % rise in traffic level and a rise of 61 % of the congestion levels on the UK roads by 2040. The state of the roads in the country today are claimed to be in bad condition, which means a huge task for local councils to handle, especially as the backlog of maintenance is calculated (in year 2012 that is) to be around £12 billion. (Local Government Association, 2014) As for the parks in the country, the outlooks are not that great

either. In a report, published in 2014, the Heritage Lottery Fund found that 86 % of park managers had seen cuts in budgets since 2010 and expected the cuts to continue during the coming years. The study concludes that there is a declining trend in the levels of public parks similar to that seen in the 1970s and 1980s. In some places this could mean that public parks services might not continue to be viable (Heritage Lottery Fund, 2014). Refer also back to earlier report on developments in the 1990s and the situation for parks about 2000 (DLTR report).

Whereas there seems to be big cuts ahead for park services, there is initiative to give more funding to roads and highways in the years to come. The differences between these two fields also mean that the different reforms of public tendering and local government power have affected them differently.

4.4.8.1 Who is responsible for what?

It is possible to divide the roads in England into three different categories – trunk roads and motorways, local authority major roads and minor roads. The government, via the Highway Agency, is responsible for the funding and planning of the strategic road network and local authorities take care of how their roads are used in a more direct way through planning and maintenance and do show a great variation in how this is done (Local Government Association, 2014).

The overall responsibility for roads and highways in the UK is held by the Highway Agency, located under the Department of Transport. Their mission is to manage and improve the road network and give best possible service to road users. It is also a task of theirs to help local councils manage street work effectively. The Highway Agency uses procurement for carrying out both work on roads as well as for consultation and auditing. It is not all roads that are under the control of the Highway Agency, they are responsible for the trunk roads. The local government is accountable for all other public roads. The Department of Transport handles everything that has to do with transportation in the UK; buses, trains, boats and roads and they plan the infrastructure in the country as a whole. It is also on their table to develop policy and guidance to local authorities and help them with funding to keep local road networks functioning. They have around 20 agencies who work for them, where the Highway Agency is one of them (Department of Transport, 2014).

On the local level, the question of transport is on the county council level. The local authority has its own road network to plan and maintain and the responsibility for local highways is often a

question for district councils. Where there is a parish council they have the right to enter the discussions about new roads, traffic signs, road widening and some aspects of highways.

No matter how small or big a local authority are, they do all have some sort of influence on the local environment as well as ground maintenance. The tasks include tending to trees and grass, keeping weeds under control and managing flowers and alike, but not the planning and landscape of architectural parts (Clark, 1997). It has been hard to find whether there is a certain central government body to look after the management/area of parks and green spaces. There is a Department of Environment, Food and Rural Affairs, but they cover forest and woodland questions as well as climate change adaption and such, and not the park or green space maintenance. Parish councils have power to decide over recreation matters such as pleasure grounds, open spaces and village greens and also Rights of Way (Office for National Statistics, 2014).

4.4.8.2 Regulations of roads

The Traffic management act came 2004 and states that local government has to take responsibility for smooth traffic, without congestion, in their road network. Local councils issue permit schemes for those who carry out street and road work and the government is supporting them in creation of these. Roads and public paths owned by a private person is not local authorities' responsibility, but is the responsibility of that private actor to take care of.

The Transport Act 2000 reformed local transport, in England and Wales that is, how it was planned and delivered. It demanded that local transport authorities make a local transport plan and to follow those policies stated in the plan. It was meant to support safe, efficient and economic transport facilities (Transport Act 2000, 108). The Local Transport Act 2008 made it possible for local transport authorities to be more flexible and organize their arrangements in a suitable way based on the local need and features. During the year of 2014 the government has promoted an initiative called Local Growth Fund that is supposed to help out with the funding of local council activities. There is already a long list of sources for funding, the Local Government Association lists around 15 different forms (Local Government Association, 2014) which is a complicating factor to the issue of maintenance on roads and highways on the local level.

4.4.8.3 The effect of different procurement models on road maintenance

The UK has a well-established practice of putting out road maintenance for public contracting. During the early years of marketization in the public sector in England, highway maintenance was one of the first subjects to be put out for tender under the 1980 Local Government Planning and Land Act. In the 1988 Local Government Act it was stated that also cleaning of streets should be a question for procurement. Under the era of Best Value, there was an array of different performances indicators for the local authorities to relate to as well as encouragement of creating their own (Department of environment, transport and regions, 2000).

One of the more common ways of funding and organizing road maintenance today is PFI. The reasons behind using PFI are that it is seen to lead to ‘value for money’ such as efficiency, lower costs etc., and it make it possible to start a project where there would not be a project otherwise (Arrowsmith, 2010). Because it is partially, sometimes fully, finance by the private provider, the government encounters a lower risk. There is a notion of quite a big government involvement in subjects relating to roads and maintenance. There has been an expression for a wish for more local influence in this matter and more possibilities for local authorities to be flexible in the funding and arrangement of road maintenance (Local Government Association, 2014). Even if subjected to public procurement for a long time, the research on road maintenance on a local level seems to have been scarce. This is an indication on a gap to fill for future studies.

4.4.9 Parks and green areas

Parks in the UK have for a long time been regarded as neglected and not taken proper care of. To lower expenditures of local government, funds for parks were cut down during the years 1980-2000. It was an easy target and did not stir up heated arguments. CCT played an important role in this development. The neo-liberal fundament of CCT implied a market-oriented approach to provision, with the problem of parks being a public service but nothing anyone paid for. It could be described as a market imperfection and led to big savings but also overlooked maintenance. However, there are reports of more money being spent on parks since 2001, which has slowly improved the state of many parks (Williams and Twaites, 2007). The report by the Heritage Lottery Fund has also found an increase in the amount of visits to public parks in recent years (Heritage Lottery Fund, 2014). The consequences of CCT have been substantial. In the aspect of work related issues there was a loss of work skill and pride for the work performed, the overall moral sank and the connection between workers and park visitors disappeared. A rise in vandalism was also noted, along with a

lack of long-term perspectives. In contrast to this there was a measurable decline of costs and work was performed more quickly, but this was a result of neglected quality, safety and tidiness (Jones, 2000).

When Best Value was introduced under the Labour government, it covered parks as well. A more social approach was to be taken where including the citizens in the process was a cornerstone. Even so, the reality of the demand on meeting indicators and benchmarking performances and all the time being accountable made it hard to lift the social aspects of Best Value. The resources available were too small to really convert the holistic approaches of Best Value into action. This also complicated the fact of actually meeting the wishes of the public. Parks continued to be neglected for a long time, and even though efforts to improve the standards of public parks were made during the 2000s, it now seems like park standards are on the decline once more.

The cuts that have been made to park management have left park service managers to find sources for funding outside the local authority. This means seeking out new ways of funding through development of more business like models and private financing. Today the change the park management has gone through has implicated a focus on partnerships and management according to private norms and this often misses out on the service aspects (Williams & Thwaties, 2007).

4.4.9.1 How park and green spaces are regulated

The question of park and open spaces maintenance seem to be a responsibility for both district and parishes and county councils as well. Ground maintenance has been subjected to tender for as long as highway maintenance, but in line with the British tradition of not putting things into laws and instead encourage compliance according to central government recommendations, there are few regulations on how tendering of parks should be done.

A way to get local councils to engage more in their parks has been through the incentive of the Green flag award. The Green flag award was introduced 1996 and works as a benchmark for parks and green spaces in the UK. It is awarded to a park/open space with an excellent management and high standard. It is a way for the local authorities to compare their parks and something to strive towards. The scheme is owned by the Department for Communities and Local Government (Green Flag Award, 2014). Another initiative that has become more common lately, are the development of so-called friend groups.

It is possible to say that the development in the management of park maintenance seems to go in the direction of shared responsibilities between local authorities and private and voluntary actors. This might be a result of diminishing funds to the local public sector from central government. It could also be because today it is more common to govern through governance mechanisms, meaning through network and partnerships. This is the ruling discourse and hence it is perceived as the best way of managing the aspect of park maintenance. This way it will cost less and still maintain a high quality. This picture is complicated by the fact that park maintenance seems to be a neglected area and short on funding. If public contracting is a way of solving this problem remains to be seen.

5 ANALYSIS – REASONS FOR USING PRIVATE CONTRACTORS

5.1 Purposes for using private contractors

This chapter delivers an analysis of the purposes for using private contractors to provide park and road maintenance in Danish municipalities. The analysis explores the importance of altogether seven key purposes for using private contractors, provides comparisons with historical purposes, purposes for using in-house provision as well as purposes for using private contractors in Denmark, Sweden, Norway and UK as well as the analysis finally explores the importance of key strategic, organizational and structural characteristics of the municipalities which can help understand differences in the importance of the purposes.

The analysis addresses the following five questions:

- A. What are the current main purposes for using private contractors in Danish municipalities?
- B. How do the purposes for using private contractors compare with the purposes for using in-house providers in Danish municipalities?
- C. How do the current purposes for using private contractors in Denmark compare with historical purposes (in the period 1980s-2010s)?
- D. How do the purposes for using private contractors in Denmark compare with the purposes for using private contractors in Norway, Sweden and UK?
- E. Which characteristics (strategic, organizational and structural) can help explain differences in the importance of the purposes for using private contractors?

The purposes for using private contractors in the public sector, more generally, have been described as a ‘moving target’, i.e. continually changing pending on policy and organizational objectives. However, primacy in public policies and theory have historically (or at least from the 1980s and onward) been given to economic objectives, in particular, in terms of cost reductions / cost savings (Hodge, 2000). Internationally, the cost-oriented focus has in some degree changed or been

complemented in the 1990s and 2000s by alternative purposes, such as delivery of ‘best value’, service development and cross-sectorial innovation (Entwistle and Martin, 2005). This shift is also echoed within the public park and road sectors where new collaborative arrangements have been introduced in various countries throughout the 1990s and 2000s (Lindholst 2009).

In addition to the developments from the 1980s and onward, long-standing purposes for using private contractors are reasoned in a role for private contractors as a ‘buffer’ for the in-house providers in periods with peak work load (e.g. snow clearing) as well as providers of tasks which require highly specialized machinery or expertise (Gjelstrup, 1992).

The INOPS survey included comparable items on altogether seven purposes for using private contractors as well as in-house provision in Denmark, Sweden, Norway and United Kingdom which reflect long-standing purposes, more cost-oriented approaches as well as newer collaborative arrangements. The seven purposes are:

- High maintenance quality
- Low maintenance costs
- Effective management of maintenance
- Test and benchmark prices
- Provide work the municipality/private cannot do
- Develop and renew areas and services
- Develop internal organization and work routines

The seven purposes have been measured by responses from high-ranked municipal park and road managers to the question: *“In what degree do you find the following purposes a key part of your municipality’s considerations for using private contractors to provide maintenance (in the areas your department has responsibility for)”*. Respondents could indicate their response on a unipolar 11-point response-scale with two end anchors, ranging from 0 (= ‘not at all’) to 10 (= ‘very high degree’).

5.1.1 Key findings and perspectives

5.1.1.1 Current purposes (question A)

The most important current purposes for using private contractors among Danish municipalities are on the average: *'low costs'* and *'test and benchmark prices'* as well as to a slightly lower degree: *'provide work the municipality cannot do.'* The least important purposes on the average are: *'develop and renew areas and services'* and *'develop internal organization and work routines'*. The municipalities as a whole tend to agree most (i.e. least inter-municipal variation) on the importance they put on the purposes of *'low costs'* and *'test and benchmark prices'* while they tend to agree least (i.e. highest inter-municipal variation) on the importance they put on the purposes of *'effective management of maintenance'*, *'high quality maintenance'* and *'provide work the municipality/private cannot do'*.

Furthermore, while some purposes on the average are of less importance there are still some municipalities where these purposes are of a relatively high importance. For example, while the average importance of the purpose: *'develop internal organization and work routines'*, a substantial group of municipalities (one quarter of those who use private contractors) still puts relatively high importance on this purpose.

5.1.1.2 Comparison between private and public provision (question B)

Current purposes for using private contractors differ from the purposes for using in-house provision. The most important purposes for using in-house provision are primarily *'high quality maintenance'* and *'effective management of maintenance'* while the most important purposes for using private contractors are *'low costs'* and *'test and benchmark prices'*.

In direct comparison there is greater emphasis on *multiple* purposes for using in-house provision compared to an emphasis on a more *narrow* set of purposes for using private contractors. This indicates that in-house contractors on the average are used for a greater range of purposes than private contractors.

5.1.1.3 Historical comparison (question C)

The historical analysis shows that the purposes for using private contractors in Danish municipalities have changed substantially in the period from 1980s to the 2010s. In the time before 1990s, the primary purposes for using private contractors in the Danish municipalities were for provision of tasks requiring specialized machinery or expertise as well as a buffer capacity in peak

work periods (Gjelstrup, 1991; 1992). In addition, the general belief in the technical departments was that the municipalities were the best and most cost effective for provision of maintenance tasks. Today, the purposes related to provision of specialized tasks and buffer capacity are still of some importance, but the overriding purpose are rooted in concerns related to cost effectiveness and benchmarks of cost and price levels. A comparison of historical survey data for the late 1980s (Gjelstrup, 1992) and for the late 1990s (Kommunernes Landsforening, 2001) indicate that the change has taken place in the 1990s.

5.1.1.4 *International comparison (question D)*

The purposes for using private contractors in Denmark are to some degree similar to the purposes for using private contractors in Sweden, Norway and England. Across all four countries, ‘*low costs*’ and ‘*provide work the municipality cannot do*’ are the highest scoring purposes while ‘*develop and renew areas and services*’ and ‘*develop internal organization and work routines*’ are the lowest scoring purposes.

Denmark differs from the three other countries by a relatively higher importance of the purposes of ‘*test and benchmark of prices*’ and ‘*develop internal organization and work routines*’. Norway, in particular, stands out from the three other countries by a particular high importance of the purpose ‘*provide work the municipality cannot do*’ and lesser emphasis on all remaining purposes.

Overall, the international comparison shows that the mix of purposes differs – as well as converges – in important aspects across the countries. In perspective, the use of private contractors is not the same across the four national contexts. The most striking difference is the substantial difference in the mix of purposes between Norwegian municipalities and municipalities in the remaining three countries (Denmark, Sweden and UK). However, it should be noted that although differences (and similarities) exists between the countries at the *general* level this do not rule out that subgroups of municipalities – or sub-regions –within each country are very similar (or very different).

5.1.1.5 *Explanation of variations (question E)*

The analysis shows that variations among municipalities (inter-municipal differences) in the importance of the purposes for using private contractors in some degree can be explained by differences in *strategic* (the level of administrative and political support for contracting out),

organizational (organization of operational responsibilities and level of contracting out) and *general municipal* (size measured by number of inhabitants) characteristics. In particular, administrative support for contracting out is significantly correlated – both positively and negatively – with differences in the importance of several purposes, while political support for contracting out only is significantly correlated with (a higher importance for) the purpose of *‘test and benchmark of prices’*. The differences in the importance of the purposes associated with the level of administrative and political support is a particular finding. This finding indicates that while the political level in the municipalities in their support of contracting out mostly are interested in what could be called ‘economic accountability’ of the way services are provided the administrative level have a much more fine-grained set of special objectives when they support contracting out.

The analysis finds regional differences in the purposes for using private contractors. Municipalities in Region North Denmark as well as Region Zealand, in particular, have different profiles in the mix of purposes compared to other regions in Denmark. One striking difference, for example, is the difference between municipalities in North Denmark and Zealand in the importance they put on *‘high maintenance quality’*, *‘low costs’* and *‘effective maintenance’* as purpose for using private contractors (lower importance in North Denmark and higher importance in Zealand). The profile of municipalities in North Denmark shows that the primary purposes for using private contractors in this part of Denmark are *‘provide work the municipality cannot do’* and *‘test and benchmark prices’*.

Which purposes the municipalities emphasize also varies according to the type of contract. In particular, those municipalities which have a higher degree of formalization of a ‘collaborative framework’ (in terms of requirements for competence, joint planning and closer collaboration, user/citizen involvement and financial incentives) put greater emphasis on *high quality, effective management, development and renewal of areas and services* and *development of organization and work routines* as purposes for using private contractors in comparison with those municipalities which have a lower degree of formalization of the collaborative framework. Those municipalities which have a higher degree of formalization of the collaborative framework also put greater emphasis on multiple purposes than those municipalities with a lower degree of formalization of the collaborative framework. Municipalities with a lower degree of formalization of the collaborative framework mainly put emphasis on *‘low costs’*, *‘test and benchmark prices’* as well as *‘provide work the municipality cannot do’*. This group of municipalities puts (very) low emphasis on all other purposes. The differences in level of contracting out between the groups with high and low

formalization of collaborative framework are furthermore statistically insignificant. This finding indicates that the ‘market’ for contracting out is managed through two very different contractual frameworks and under two different set of purposes.

5.1.1.6 Discussions and perspectives

The analysis provides a nuanced portrait of the purposes for using private contractors for provision of park and road maintenance in Danish municipalities. The provided portrait differs from standard assumptions on purposes for contracting out in mainstream theory as well the official purposes underlying government policies (see introduction chapter). The detailed analyses of the purposes for using private contractors for provision of park and road maintenance services show that there are substantial differences between the municipalities – including subgroups of municipalities – as well as purposes has changed substantially over time. Substantial differences are also found across national contexts.

In perspective, the analysis indicates that the *context* of contracting out shapes the mix of municipal purposes for using private contractors – or at least purposes varies across contexts. In particular the administrative level in the municipalities – when they more strongly support contracting out – makes a difference with regard to the emphasis – or de-emphasis – of the particular purposes in the total mix of purposes. The analysis also shows that stronger support from the political level mainly emphasizes the purpose of *‘testing and benchmarking prices’*. However, it should be noted that the purpose of cost-effective maintenance is of relatively high importance for the political level regardless of the level of political support for contracting out. The analysis shows that the political and administrative level thinks differently about the purposes for involvement of private contractors in the provision of park and road maintenance services. Politicians are mainly concerned with economics while the administrative level in the municipalities is also concerned with a number of other purposes.

5.1.2 Purposes for using private contractors in Denmark

Reported survey results and case studies from time around 1990 by Gjelstrup (1991; 1992) show that an ‘administrative ideology’ in the technical departments in Danish municipalities at that time tended to favor in-house provision vis-à-vis the use of private contractors. Primary motives for reliance on in-house provision were a belief that it in general provided superior performance in

terms of being ‘best and cheapest’. However, at that time technical departments lacked transparent accountancy and performance management systems which could document or support such beliefs. The belief seemed to be based on a professional judgment (Gjelstrup, 1992). The key reasons for private sector involvement were at that time provision of tasks in demand of ‘specialized’ expertise or equipment which could not be provided immediately by municipal service departments as well as a ‘buffer’ for municipal service departments in peak work periods (e.g. snow clearing).

According to later survey data on the use of procurement in local government in the last half of the 1990s (Kommunernes Landsforening, 2001) the overriding political reason for using public procurement (but not necessarily contracting out) by the end of the 1990s was cost efficiency concerns in terms of providing services ‘best and cheapest’ as well as the involvement of private contractors in itself was a main reason. A comparison of findings from the early 1990s with findings from the late 1990s indicates that a major shift in the motives for involving private contractors has taken place within this period.

The 2015-data from the INOPS survey provide information on municipal park and road managers’ evaluation of the importance of various purposes for using private contractors as well as in-house provision for park and road maintenance in Danish municipalities. In the survey the respondents were asked to rate on a scale from 0 to 10, where 0 = not at all and 10 = very high degree, how important altogether seven purposes were for their municipality’s use of private contractors for provision of park and road maintenance. The question was asked separately to those who respectively used private contractors and those who used in-house providers.

Table 8.
Importance of purposes for using in-house provision and private contractors

Importance of purpose ^a	Mean score (standard deviations)				Mean score difference ^b
	Using private contractors (N=67)		Using in-house providers (N=61)		
High maintenance quality	5.1	(2.7)	7.6	(2.1)	2.5 **
Low maintenance costs	7.5	(2.0)	7.3	(2.2)	0.2 ^{ns}
Effective management of maintenance	5.2	(2.8)	7.7	(2.3)	2.5 **
Test and benchmark prices	7.5	(2.2)	6.8	(2.6)	0.7 **
Provide work the municipality/private cannot do	6.7	(3.0)	6.6	(2.9)	0.1 ^{ns}
Develop and renew areas and services	4.6	(2.3)	6.5	(2.4)	1.9 **
Develop internal organization and work routines	5.0	(2.3)	7.1	(2.3)	2.1 **

Source: INOPS survey data

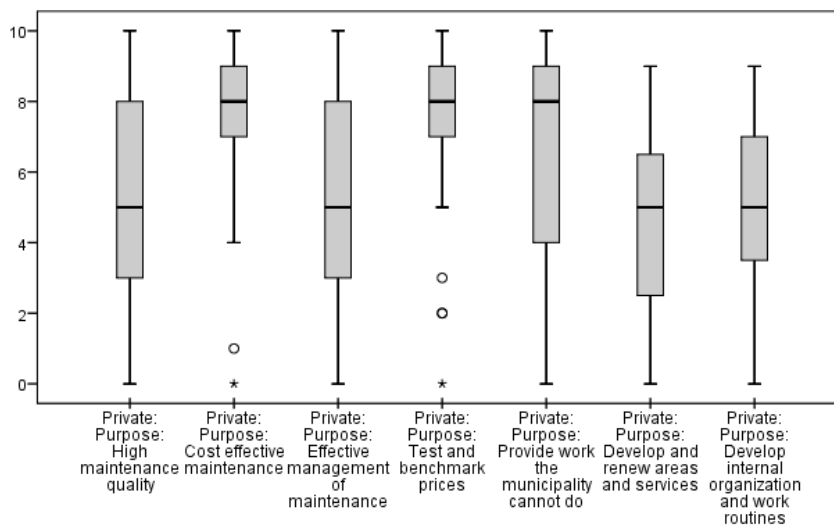
^a All items based on responses to the question: “In what degree do you find the following purposes a key part of your municipality’s considerations for using private contractors to provide maintenance (in the areas your department has responsibility for)”. Items measured by an 11-point response-scale with anchors (0 = ‘not at all’ and 10 = ‘Very high degree’).

^b Score differences evaluated with one sample T-tests at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant. One sample T-test is chosen as preferred method for evaluation of the difference in mean scores as the two groups are only partially overlapping (i.e. some municipalities only use private contractors or in-house providers while other municipalities rely on both type of provision).

The data presented in Table 8 show the average scores for the seven different purposes for using private contractors and in-house provision for park and road maintenance in the Danish Municipalities. In addition, Figure 7 shows the same data in boxplots for the importance of the seven purposes for using private contractors.

According to the data the two most important purposes for using private contractors among Danish Municipalities by the mid2010s are, economic considerations in term of *'test and benchmark prices'* as well as *'low costs'* (mean scores = 7.5). Getting (specialized) tasks done which the municipality cannot do itself are also a relatively important purpose (mean score = 6.7) for using private contractors. The mean scores for the remaining four purposes are just around the mean scale score of 5 which can be interpreted as an indication of these as less important (but still not unimportant). The figures for standard deviations show that the inter-municipal differences in general are high. The highest level of inter-municipal differences is for *'Provide work the municipality cannot do'* (*S.D.* = 3.0) which indicates that the scores for 66 % of the municipalities is likely to lie between 3.7 and 9.7.⁴⁹

Figure 7. Importance of purposes for using private contractors (boxplot).



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled box represents 50 % of the cases, the top of the box represent the 75 % quartile and the bottom the 25 % quartile. The middle of the box represents the median value (or the 50 % quartile). 95 % of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The information given by the boxplots in Figure 7 provide more detailed information on the high levels of inter-municipal differences reported in Table 8. Similar to the figures on standard

⁴⁹ The likelihood assumes a normal distribution.

deviations, the boxplot shows least variation among the municipalities for the importance of *'test and benchmark prices'* and *'low costs'* [in the figure labeled as: *'private: purpose: cost effective maintenance'*] compared to the other five purposes. This indicates that there is relatively higher agreement (less difference) among the municipalities for the importance of these purposes than the remaining five purposes. Some 'outliers', i.e. strongly deviating municipalities, account for most of the variance for these two purposes.

The boxplot also shows that although the average scores for some purposes are relatively low still some municipalities find these of higher importance. For example, 25 % of the municipalities score the purpose of *'high quality maintenance'* between 8 and 10, i.e. find this purpose of very high importance. Similarly, while the mean score for the two purposes related to development are centered around the mid-score (5) on the scale 25 % of the municipalities score *'development and renewal of areas'* between 6 or higher while other 25 % of the municipalities score *'development of internal organization and work routines'* between 7 or higher. In other words, significant groups of municipalities evaluate these purposes as being of relatively high importance. Likewise, the boxplots also shows that for several purposes significant groups of municipalities find these of no or little importance (i.e. scores for the first quartile range between 0 and 3 or 4). Similar low rankings for significant groups of municipalities are true for five out of the seven purposes.

Table 8 also shows an analysis of the differences in respondents' evaluation of the importance of the various purposes between private contractors and in-house providers. In the interpretation of this analysis it should be noted that the respondents are employed in the municipalities and to an unknown degree are suspect to favor the importance of their own organization. In other words, we would expect the respondents not to overestimate the importance of private contractors as well as not to underestimate the importance of their own organizations. Further analysis in the sections below shows, for example, that characteristics related to organizational responsibilities have significant effects on the evaluation of the importance of the purposes for using private contractors (see Table 11).

The statistics on differences in the importance of purposes between contractors and in-house provision in Table 8 shows that the importance of the various purposes for using private contractors by the mid2010s differs in key aspects from the importance of the purposes for using in-house provision. Firstly, the various purposes for using in-house providers are on the average evaluated as more important (by comparatively higher mean scores) than the purposes for using private contractors. The difference is statistically significant for four out of the seven purposes. Only for the

purpose of *‘Test and benchmark prices’* the use of private contractors is evaluated as (significantly) more important than the use of in-house contractors. Secondly, all other purposes for using in-house provision of maintenance is evaluated as having relatively high importance measured on the response scale where ‘0’ indicates no importance at all and ‘10’ indicates a very high degree of importance. Mean scores varies between 6.5 for *‘develop and renew areas and services’* and 7.7 for *‘effective management of maintenance’*.

The findings clearly point to the overriding importance of using private contractors to serve economic purposes as well as to a lesser, but still important, degree to use private contractors in the ‘historical’ role for providing services which cannot immediately be provided in-house. Another clear finding is that private contractors are involved for a narrower set of purposes compared to the relatively high importance of multiple purposes for using in-house provision. In comparison with earlier studies, the analysis shows that the leading motives for using private contractors in terms of provision of ‘specialized tasks’ and as a ‘buffer’ in the early 1990s are still important, but now overshadowed by economic concerns regarding efficiency and economic accountability.

5.1.3 Comparing purposes between Denmark, Sweden, Norway and UK

This section compares the importance of seven purposes for using private contractors across Denmark, Sweden, Norway and UK. Table 9 shows key statistics generated from the INOPS survey data (number of municipalities, mean scores and standard deviations). The weighted average scores for municipalities in all countries are also shown in Figure 8.

Table 9.
Importance of purposes for using private contractors in four countries

Importance of purpose ^a	Mean scores (standard deviations)								
	Denmark (N=67)		Sweden (N=65)		Norway (N=68)		UK (N=52)		Weighted mean scores ^b
High maintenance quality	5.1	(2.0)	5.6	(2.9)	5.1	(2.8)	6.3	(2.8)	
Low costs	7.5	(2.2)	7.4	(2.0)	5.8	(3.1)	7.7	(2.2)	7.1
Effective management of maintenance	5.2	(3.0)	5.9	(2.5)	5.4	(2.7)	6.1	(2.6)	5.6
Test and benchmark prices	7.5	(2.8)	6.2	(2.7)	5.4	(2.8)	6.2	(2.7)	6.3
Provide work the municipality/private cannot do	6.7	(2.7)	7.0	(3.0)	8.0	(2.1)	5.7	(3.8)	6.9
Develop and renew areas and services	4.6	(2.3)	4.4	(2.7)	4.2	(2.8)	4.6	(3.3)	4.4
Develop internal organization and work routines	5.0	(2.3)	4.0	(2.7)	3.9	(2.4)	4.1	(3.1)	4.3

Source: INOPS survey data

^a All items measured by an 11-point response-scale with anchors (0 = ‘not at all’ and 10 = ‘Very high degree’).

^b The number of cases for each country is used as weights.

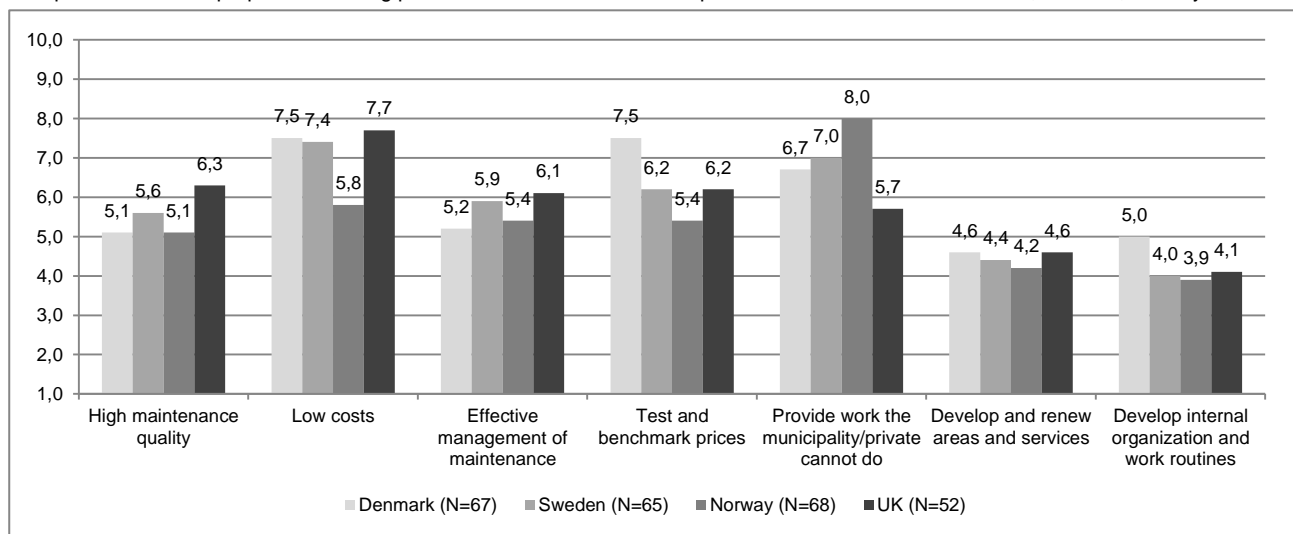
The analysis shows both differences and similarities among the countries in the purposes for using private contractors. Across all four countries, *‘low costs’* and *‘provide work the municipality*

cannot do' are the highest scoring purposes (weighted mean scores = 7.1 and 6.9) while 'develop and renew areas and services' and 'develop internal organization and work routines' are the lowest scoring purposes (weighted mean scores = 4.4 and 4.3).

The data indicates that municipalities in Denmark in comparison with the three other countries in particular put greater emphasis on 'test and benchmark prices' as purpose for using private contractors (mean score = 7.5). The difference is greatest in comparison with Norway (mean score = 5.8). Similarly, but to a lesser extent, the municipalities in Denmark also stand out by a relatively higher emphasis on 'develop internal organization and work routines' (mean score = 5.0) compared to the three other countries. The purposes for using private contractors in Denmark seems very similar to the purposes for using private contractors in Sweden except for a lower emphasis on 'test and benchmark prices' in Sweden (mean score = 6.2 in Sweden and 7.5 in Denmark). In sum, the profile of the importance of the seven purposes for using private contractors in Denmark differs in various degrees from the profiles in the three other countries.

Figure 8.

Comparison of seven purposes for using private contractors for road and park maintenance across Denmark, Sweden, Norway and UK



All items based on responses to the question: "In what degree do you find the following purposes a key part of your municipality's considerations for using private contractors to provide maintenance (in the areas your department has responsibility for)". Items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

Municipalities in Norway stand on the average out as being most different from the municipalities in the three other countries. Mean scores for municipalities in Norway are in particular low for all purposes except for 'provide work the municipality cannot do' (mean score = 8.0) which is the highest score among the four countries for this purpose. The difference for this purpose is most notable compared to the lower mean score for UK (mean score = 5.7).

Municipalities in Norway also stand out for the relatively low mean score for *'low costs'* (mean score = 5.8) which is significantly lower than the mean scores for all other countries. UK also stands out with the highest emphasis on high maintenance quality (mean score = 6.3) as well as the lowest mean score for *'provide work the municipality cannot do'* (=5.7). For three particular purposes there are also very high variations among UK municipalities (measured by values for standard variations) compared to variations in the three other countries. This is particular for *'provide work the municipality cannot do'* (S.D. = 3.8), *'develop and renew areas and services'* (S.D. = 3.3) and *'develop internal organization and work routines'* (S.D. = 3.1).

5.2 Explanations for variations in purposes

Table 8 showed the average scores for seven different purposes for using private contractors and in-house provision in Denmark. However, there are significant variations between the municipalities in how important they find the various purposes (measured by standard deviations which range from 2.0 to 3.0). This section explores the variations among the Danish municipalities further as well as providing some explanation for the variations.

5.2.1 Regional differences in Denmark

Some research has shown that geographical differences, such as urban-rural status, matters for the use of contracting out. In a Danish context municipalities are geographically organized in five administrative regions. The five regions differ in size and population density. For example, the Region of North Denmark is less densely populated than the Capital Region. The importance of the purposes for using private contractors across the five administrative regions in Denmark is explored in Table 10 and Figure 9. The data shows that the importance of particular purposes on the average varies across the five administrative regions in Denmark.

'High maintenance quality' is least important in Region Central Denmark and most important in Region Zealand. *'Low costs'* is least important in Region North Denmark while most importance in Region Zealand. *'Effective management'* is least important in North Denmark and most important in Region Zealand. The purposes of *'test and benchmark prices'* is least important in Region South Denmark and most important in Region Zealand. The purpose of *'provide work the municipality cannot do'* is most important in Region North Denmark and least important in Central Denmark Region.

Table 10.
Differences in purposes of the importance of the purposes for using private contractors across five administration regions

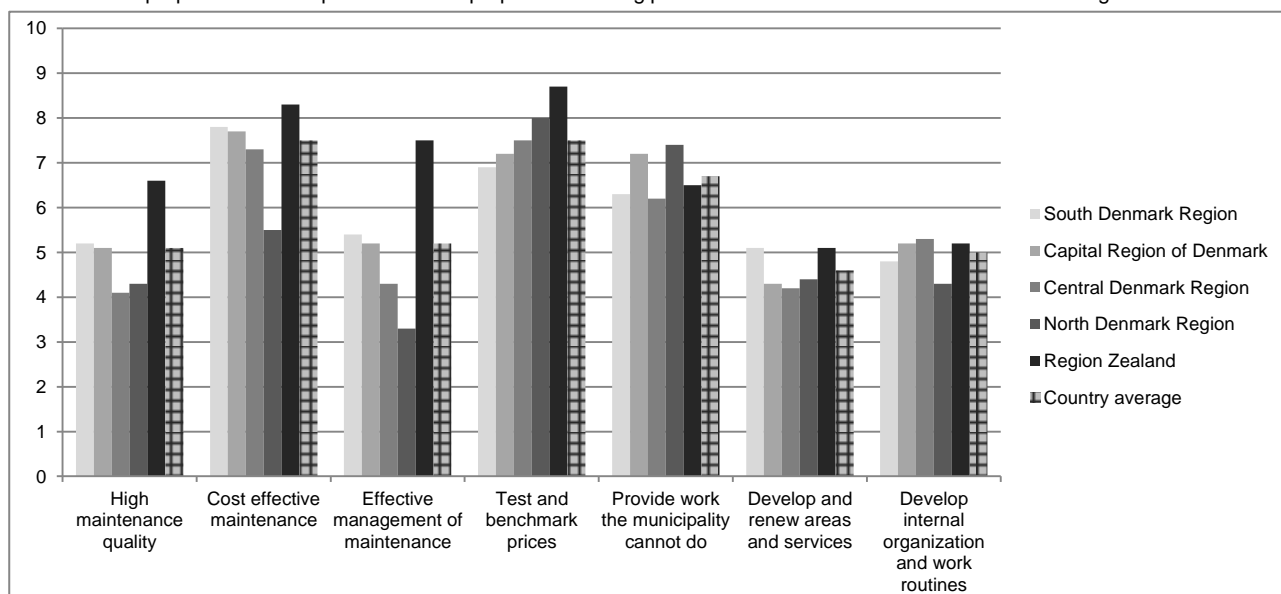
Importance of purpose ^a	Municipalities within regions Mean scores (standard deviations) ^b											
	South Denmark (N = 17)		North Denmark (N = 8)		Central Denmark (N = 15)		Capital of Denmark (N = 17)		Zealand (N = 10)		Denmark (N = 67)	
High maintenance quality	5.2	(3.0)	4.3	(3.1)	4.1	(2.5)	5.1	(2.7)	6.6	(2.2)	5.1	(2.7)
Low costs	7.8	(1.4)	5.5	(2.3)	7.3	(2.5)	7.7	(1.8)	8.3	(1.1)	7.5	(2.0)
Effective management of maintenance	5.4	(2.9)	3.3	(2.3)	4.3	(2.8)	5.2	(2.6)	7.5	(1.5)	5.2	(2.7)
Test and benchmark prices	6.9	(2.1)	8.0	(2.8)	7.5	(2.1)	7.2	(2.5)	8.7	(1.3)	7.5	(2.3)
Provide work the municipality cannot do	6.3	(3.6)	7.4	(2.9)	6.2	(3.1)	7.2	(2.9)	6.5	(2.7)	6.7	(3.0)
Develop and renew areas and services	5.1	(2.7)	4.4	(2.4)	4.2	(2.2)	4.3	(2.2)	5.1	(2.2)	4.6	(2.3)
Develop internal organization and work routines	4.8	(2.8)	4.3	(2.3)	5.3	(2.3)	5.2	(2.4)	5.2	(1.6)	5.0	(2.3)
PPI (N=98, all municipalities)	49 %	(15%)	38 %	(8%)	47 %	(17%)	38 %	(17%)	46 %	(16%)	43 %	(16%)
PPI (N=75, with survey data)	50 %	(16%)	38 %	(9%)	47 %	(18%)	40 %	(19%)	48 %	(18%)	45 %	(17%)

Source: INOPS survey data and Statistic Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

^b The number of cases is relatively low in each category (e.g. N = 8 for North Denmark) and differences between groups should be interpreted with caution.

Figure 9.
Differences in purposes of the importance of the purposes for using private contractors across five administration regions



All items based on responses to the question: "In what degree do you find the following purposes a key part of your municipality's considerations for using private contractors to provide maintenance (in the areas your department has responsibility for)". Items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

The ranking of the importance of the purposes are also different within each Region. In four Regions the purposes of 'low costs' and 'test and benchmark prices' are among the two to three most important purposes. In Region North Denmark, however, 'low costs' are of less importance

compared to the two most important purposes in this region, which are: *'test and benchmark prices'* and *'provide work the municipality cannot do'*.

5.2.2 Importance of operational responsibilities

A key characteristic in the organization of road and park departments in Danish municipalities since the municipal reform in 1970 has been whether operational responsibilities for maintenance is organized together with or separated from administrative and planning responsibilities (Gjelstrup, 1991; 1992). Later, the public reforms of the 1980s and 1990s emphasized a separation between purchaser and provider responsibilities in order to enhance internal management and accountability as well as introducing competitive pressures to in-house provision by use of public procurement and contracting out (Nuppenau, 2009).

Table 11.

Differences in purposes for using private contractors for road and park maintenance between respondents with and without operational responsibilities

Importance of purpose ^a	Mean scores		Mean score difference ^b	ETA SQ
	Without operational responsibilities (N=20)	With operational responsibilities (N=47)		
High maintenance quality	5.9	4.7	1.2 ^{ns} (but p = .107)	.041
Low costs	8.4	7.1	1.3 **	.097
Effective management of maintenance	6.3	4.7	1.6 *	.073
Test and benchmark prices	7.9	7.4	0.5 ^{ns}	.012
Provide work the municipality cannot do	5.0	7.4	2.4 **	.125
Develop and renew areas and services	4.7	4.6	0.1 ^{ns}	.001
Develop internal organization and work routines	4.7	5.1	0.4 ^{ns}	.008
<i>Level of contracting out (PPI) ^c</i>	52 %	41 %	11 % *	.081

Sources: INOPS survey data (N = 67) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

^b Score differences evaluated with two sample t-test at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^c PPI = Private Purchasing Index. Only data for municipalities which use private contractors.

Table 11 shows an analysis of differences in the importance of purposes for using private contractors between road and park managers (respondents) which are located in departments with and without operational responsibilities. Managers in departments without operational responsibilities put in particular greater emphasis on *'low costs'* (mean score = 8.4) as well as *'effective management of maintenance'* (mean score = 6.3) in comparison with managers in departments with operational responsibilities (comparable mean scores = 7.1 and 4.7). On the other hand, managers in departments with operational responsibilities put greater emphasis on *'provide work the municipal cannot do'* as purpose for using private contractors (mean score = 7.4) than

managers in departments without these responsibilities (mean score = 5.0). For the group of departments with operational responsibilities the findings indicate that private contractors are used in particular for provision of services which cannot readily be provided in-house as well as for economic purposes in terms of *'test and benchmark of prices'* as well as *'low costs'*. For the group of departments without operational responsibilities the findings indicate that private contractors are used in particular for economic purposes, but also for the purposes of *'effective management of maintenance'* (mean score = 6.3) and *'high maintenance quality'* (mean score = 5.9).

Table 12 shows an analysis of differences in the importance of purposes for using in-house provision between road and park managers (respondents) which are located in organizations with and without operational responsibilities. In general, managers in departments with operational responsibilities put greater emphasis on all but one purpose (test and benchmark prices) for using in-house provision compared to managers in departments without operational responsibilities. This finding indicates that managers in departments with operational responsibilities are involved with the in-house provider for a broader range of purposes and utilize the in-house provider to a greater extent for serving these purposes. Managers in departments without operational responsibilities still find in-house provision relatively important for various purposes but to a lesser extent which indicates that these managers are less dependent on in-house provision for serving the various purposes. This conclusion is also supported by the difference in mean scores between the two groups for the purpose *'provide work private contractors cannot do'* (difference = 1.6, statistically significant at p-level = .1).

Table 12.

Differences in purposes for using in-house provision for road and park maintenance between respondents with and without operational responsibilities

Importance of purpose ^a	Mean score		Score difference ^b	ETA SQ
	Without operational responsibilities (N=16)	With operational responsibilities (N=45)		
High maintenance quality	6.3	8.1	1.8 **	.142
Low costs	6.3	7.6	1.3 *	.067
Effective management of maintenance	6.3	8.2	1.9 **	.145
Test and benchmark prices	6.1	7.1	1.0 ^{ns}	.030
Provide work private contractors cannot do	5.4	7.0	1.6 [†]	.059
Develop and renew areas and services	5.6	6.8	1.2 [†]	.046
Develop internal organization and work routines	6.1	7.4	1.3 *	.068
<i>Level of contracting out (PPI) ^c</i>	46 %	39 %	7 % *	.081

Sources: INOPS survey data (N = 61) and Statistics Denmark

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

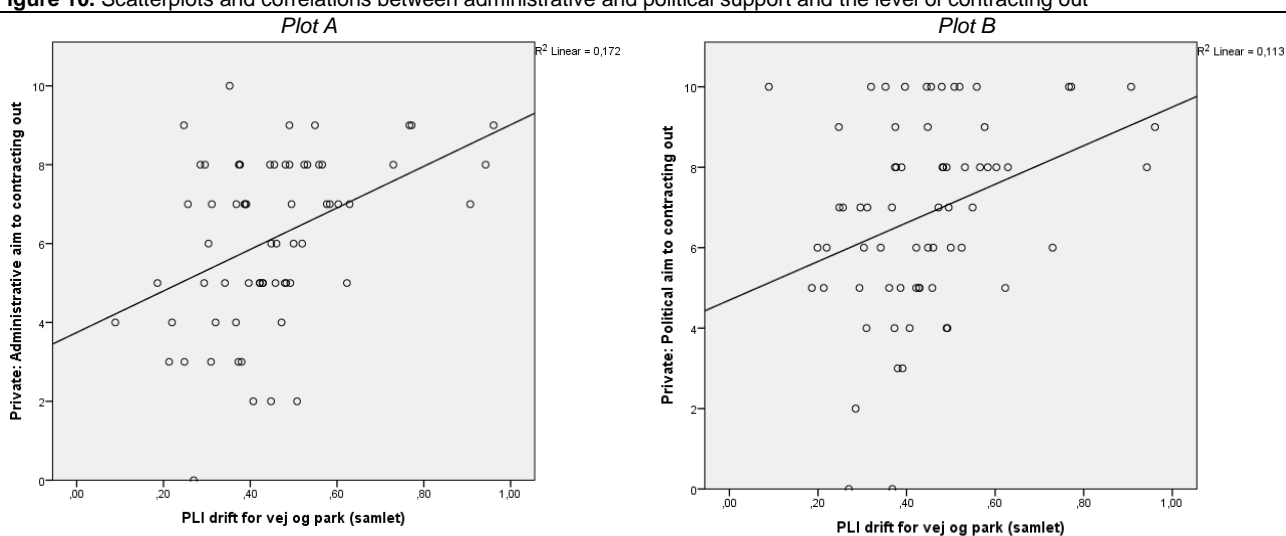
^b Score differences evaluated with two sample t-test at significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c PPI = Private Purchasing Index. Only data for municipalities which use in-house providers

5.2.3 Importance of political and administrative support

Political and administrative support in terms of the degree it is a political and administrative aim to contract out park and road maintenance services varies among Danish municipalities. On the average we find a general support for contracting out at both the political and administrative level in Danish municipalities. The mean scores for political and administrative support are 6.8 and 6.1 respectively on a scale where '0 = not at all' and '10 = very high degree'. Higher levels of political and administrative support are furthermore positively correlated with higher levels of contracting out (see plot A and plot B in Figure 10).

Figure 10. Scatterplots and correlations between administrative and political support and the level of contracting out



Source: INOPS data 2015.

Table 13 shows an analysis of the importance of higher and lower levels of political support for the emphasis on different purposes for contracting out road and park maintenance services in Danish municipalities. If we divide the municipalities in two groups based on the median value for political support we get two roughly equal numbered groups. The group with scores above the median value (N=38) has higher political support on the average (mean score = 8.6) while the group with values below the median value (N=30) has lower political support on the average (mean score = 4.6).

The analysis of differences in the importance of purposes between the two groups finds that they mainly differ in the importance of 'test and benchmark prices' where the average score is significantly higher in group with higher political support compared to the group with lower political support. Higher political support is also associated with higher levels of contracting out.

For both groups, economic concerns in terms of the purposes ‘*test and benchmark prices*’ and ‘*low costs*’ as well as the purpose ‘*provide work private contractors cannot do*’ are amongst the most important (and highly supported).

Table 13.

Differences in purposes for using private contractors between municipalities with higher and lower levels of political support for contracting out road and park maintenance

Importance of purpose ^a	Mean scores		Score difference ^b	Pearson's r ^d
	Higher political support (N=38) ^c	Lower political support (N=30) ^c		
High maintenance quality	5.5	4.5	1.0 ^{ns}	.081 ^{ns}
Low costs	7.4	7.6	÷ 0.2 ^{ns}	.123 ^{ns}
Effective management of maintenance	5.6	4.6	1.0 ^{ns}	.102 ^{ns}
Test and benchmark prices	8.1	6.7	1.4 [†]	.237 [†]
Provide work the municipality cannot do	6.5	7.0	÷ 0.5 ^{ns}	÷ .153 ^{ns}
Develop and renew areas and services	4.9	4.2	0.6 ^{ns} (p = .125)	.059 ^{ns}
Develop internal organization and work routines	5.4	4.5	0.9 ^{ns}	.173 ^{ns}
<i>Level of political support</i>	8.6	4.6	4.0 [*]	-
<i>Level of contracting out (PLI)</i>	49 %	39 %	10 % [†]	.336 ^{**}

Source: INOPS survey data (N = 65)

^a All items measured by an 11-point response-scale with anchors (0 = ‘not at all’ and 10 = ‘Very high degree’).

^b Score differences between the two groups are evaluated with two sample t-tests at significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Groups based on median value for political support (median value = 7).

^d Test for bivariate correlation (Pearson's r) use the continuous variable for political support (scale: 0-10) to test the associations with purposes (two-tailed significance levels).

Table 14 shows an analysis of the importance of administrative support similar to the analysis shown in Table 13. There are significant differences among the municipalities in the level of administrative support for contracting out. The mean score for administrative support in the group with higher administrative support is 7.9 while the mean score in the group with lower administrative support is 4.3. Test shows that the difference is statistically significant. The analysis shows that higher administrative support is significantly associated with higher importance of five out of the seven purposes for using private contractors.

In addition, the importance of the various purposes within each group seems to differ in key aspects. In the group with lower administrative support the least important purposes seem to be of even lesser importance than in the group with higher administrative support. In the group with lower administrative support, mean scores are only above the midscale score of 5 for the three ‘standard’ purposes of ‘*test and benchmark prices*’, ‘*low costs*’ and ‘*provide work private contractors cannot do*’. In the group with higher administrative support, on the other hand, we find that scores for all purposes are above the midscale score of 5. This comparison indicates that a

greater range of purposes are found important in municipalities with higher administrative support for contracting out than in municipalities with lower administrative support.

Table 14.

Differences in purposes for using private contractors between municipalities with higher and lower levels of administrative support for contracting out road and park maintenance

Importance of purpose ^a	Mean scores		Score difference ^b	Pearson's r ^d
	Higher administrative support (N=34) ^c	Lower administrative support (N=31) ^c		
High maintenance quality	6.4	3.4	3.0 **	.413 **
Low costs	7.2	7.7	÷ 0.6 ^{ns}	÷ .139 ^{ns}
Effective management of maintenance	6.6	3.6	3.0 **	.471 **
Test and benchmark prices	8.0	7.1	0.9 †	.237 †
Provide work the municipality cannot do	6.9	6.5	0.4 ^{ns}	.034 ^{ns}
Develop and renew areas and services	5.4	3.7	1.8 **	.282 *
Develop internal organization and work routines	5.7	4.2	1.5 *	.304 *
<i>Level of administrative support</i>	7.9	4.3	3.3 **	-
<i>Level of contracting out (PPI)</i>	51 %	39 %	13 % **	.415 **

Source: INOPS survey data (N = 65)

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

^b Score differences evaluated with two sample t-test at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Groups based on median value for administrative support (median value = 7).

^d Test for bivariate correlation (Pearson's r) use the continuous variable for administrative support (scale: 0-10) to test the associations with purposes (two-tailed significance levels).

The analysis of the importance of political and administrative support for contracting out shows that for both higher political and administrative support 'test and benchmark prices' is more pronounced purpose than for the groups with lower political and administrative support. Both analyses highlight the importance of overall political and administrative support for exploring differences in the relative importance of different purposes for using private contractors. This is in particular true for the level of administrative support where the importance of five out of seven purposes are different between the groups with respectively lower and higher administrative support for contracting out. However, despite differences, it should be noted that the level of political and administrative support for contracting out park and road maintenance services in general are high among Danish municipalities.

5.2.4 Importance of contractual framework

Analysis of the importance of the design of the contractual framework for the emphasis of the purposes for using private contractors is shown in Table 15 and Table 16. Overall, the analysis investigates differences in the emphasis on the seven purposes that between municipalities with respectively higher and lower levels in the formalization of the *transactional* as well as the

collaborative contractual framework. While some differences in the mix of purposes are found between municipalities with higher and lower degrees of formalization of the transactional contractual frameworks (Table 15) the differences in the mix of purposes are more striking between municipalities with higher and lower degrees of formalization of the collaborative contractual frameworks (Table 16). Figure 11 illustrates the differences in the mix of purposes between municipalities with higher and lower degrees of formalization of the collaborative contractual frameworks in a bar chart. The tests for the linear associations in Table 15 shows that the findings based on the split into two groups based on the median value for the level of transactional contract framework is not corresponding with findings in a bivariate analysis based on the continuous variables. In particular, the tests for linear association find that emphasis on ‘*test and benchmark prices*’ (as well as the level of contracting out) is positively associated (p-level < .1) with higher levels of transactional contract framework. The analysis based on group comparisons does not indicate any association in these cases. For the analysis of the association between the purposes ‘*high maintenance quality*’ and ‘*effective management of maintenance*’ and the level of transactional contract framework both tests shows a (positive) statistical significant association.

Table 15.

Differences in purposes for using private contractors for road and park maintenance between respondents with high and low levels of formalized transactional contractual frameworks

Importance of purpose ^a	Mean scores		Mean score difference ^b	ETA SQ	Pearson's r ^d
	High level (N=35)	Low level (N=30)			
High maintenance quality	5.9	4.1	1.8 **	.112	.405 **
Low costs	7.8	7.2	0.6 ^{ns}	.024	.073 ^{ns}
Effective management of maintenance	5.9	4.3	1.6 *	.073	.346 **
Test and benchmark prices	7.8	7.5	0.3 ^{ns}	.007	.246 †
Provide work the municipality cannot do	6.6	6.8	÷ 0.2 ^{ns}	.001	÷ .136 ^{ns}
Develop and renew areas and services	5.0	4.2	0.8 ^{ns}	.029	.178 ^{ns}
Develop internal organization and work routines	5.2	4.8	0.4 ^{ns}	.005	.133 ^{ns}
Level of transactional framework	8.9	5.2	3.7 **	.686	-
Level of contracting out (PPI) ^c	47 %	43 %	4 % ^{ns}	.013	.215 †

Sources: INOPS survey data (N = 67) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = ‘not at all’ and 10 = ‘Very high degree’).

^b Score differences evaluated with two sample t-test at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^c PPI = Private Purchasing Index. Only data for municipalities which use private contractors.

^d Test for bivariate correlation (Pearson's r) use the continuous variable for transactional contract framework (scale: 0-10) to test the associations with purposes (two-tailed significance levels).

In particular, those municipalities which have a higher degree of formalization of a ‘collaborative framework’ (in terms of requirements for competence, joint planning and close collaboration, user/citizen involvement and financial incentives) put greater emphasis on *high quality, effective management, development and renewal of areas and services* and *development of organization and*

work routines as purposes for using private contractors in comparison with those municipalities which have a lower degree of formalization of the collaborative framework. Those municipalities which have a higher degree of formalization of the collaborative framework also put greater emphasis on multiple purposes than those municipalities with a lower degree of formalization of the collaborative framework.

Table 16.

Differences in purposes for using private contractors for road and park maintenance between respondents with high and low levels of formalized relational contract frameworks (RCF)

Importance of purpose ^a	Mean scores		Mean score difference ^b	ETA SQ	Pearson's r ^d
	High level (N=38)	Low level (N=27)			
High maintenance quality	5.8	3.8	2.0 **	.121	.304 *
Low costs	7.5	7.6	÷ 0.1 ^{ns}	.001	÷ .156 ^{ns}
Effective management of maintenance	6.4	3.3	3.1 **	.300	.444 **
Test and benchmark prices	7.8	7.3	0.5 ^{ns}	.016	.192 ^{ns}
Provide work the municipality cannot do	6.6	6.7	÷ 0.1 ^{ns}	.001	÷ .118 ^{ns}
Develop and renew areas and services	5.5	3.2	2.3 **	.229	.402 **
Develop internal organization and work routines	5.8	3.8	2.0 **	.174	.374 **
Level of RCF	6.0	2.6	3.4 **	.628	-
Level of contracting out (PPI) ^c	47 %	42 %	5 % ^{ns}	.023	.236 [†]

Sources: INOPS survey data (N = 67) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

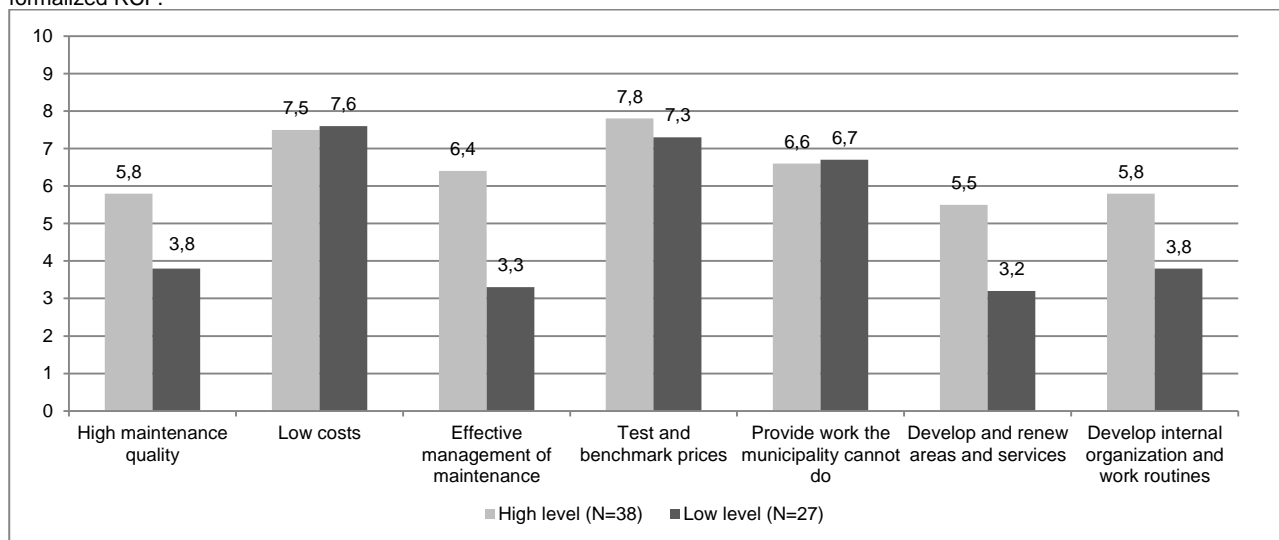
^b Score differences evaluated with two sample t-test at significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c PPI = Private Purchasing Index. Only data for municipalities which use private contractors.

^d Test for bivariate correlation (Pearson's r) use the continuous variable for collaborative contract framework (scale: 0-10) to test the associations with purposes (two-tailed significance levels).

Municipalities with a lower degree of formalization of the collaborative framework mainly put emphasis on '*low costs*', '*test and benchmark prices*' as well as '*provide work the municipality cannot do*'. This group of municipalities puts (very) low emphasis on all other purposes. The differences in level of contracting out between the groups with high and low formalization of collaborative framework are furthermore statistically insignificant. This finding indicates that the 'market' for contracting out of parks and road services is managed through two very different contractual frameworks and under two different mixes of purposes.

Figure 11. Differences in purposes for using private contractors for road and park maintenance between respondents with high and low levels of formalized RCF.



All items based on responses to the question: "In what degree do you find the following purposes a key part of your municipality's considerations for using private contractors to provide maintenance (in the areas your department has responsibility for)". Items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').

5.2.5 Importance of contracting levels and municipal size

Municipal size and the level of contracting out can also be expected to have importance for the purposes for using private contractors. Larger municipalities may, for example, have a larger capacity for organizing more specialized tasks in-house and ensure economy of scale for more specialized machinery. However, the importance may be subtle as a high level of contracting out may reduce the in-house capacity and increase dependency of private contractors. Low levels of contracting out may also be associated with a more pronounced use of markets for test and benchmark of internal cost levels.

Table 17 shows an analysis of differences in the importance of seven purposes for using private contractors between municipalities with low (0 – 33 %), medium (33 – 66 %) and high (66 – 100 %) levels of contracting out of road and park maintenance. The level of contracting out is measured by calculation based on available municipal statistics of a Private Purchaser Index (PPI) for road and park maintenance services. A comparison is also provided in Figure 12. The analysis shows that there are statistically significant differences (at p-level < .1) for the purposes of 'low costs' and 'provide work the municipal cannot do' between the groups with low, medium and high level of contracting out. In particular, the group with high contracting levels puts less importance (mean score = 3.3) for the purpose of 'provide work the municipal cannot do' than the groups with medium and low contracting levels (mean scores = 7.3 and 6.3). Furthermore, the statistics indicate

‘close to significant’ differences (indicated by p-values just above .1) for the purposes of ‘high maintenance quality’ and ‘effective management of maintenance’. No differences are indicated in the analysis between the three groups of different sized municipalities and the purposes of ‘test and benchmark prices’, ‘develop and renew areas and services’ and ‘develop internal organization and routines’.

Table 17.

Analysis of differences in purposes for using private contractors between municipalities with low, medium and high levels of contracting out of road and park maintenance

Importance of purpose ^a	Mean scores ^c			Test of associations ^b	
	Low level (N=15)	Medium level (N=46)	High level (N=7)	ETA SQ	Test for linearity (R ²)
High maintenance quality	4.3	5.1	6.5	.043 ^{ns}	.041 ^{ns} (P = .113)
Low costs	6.4	7.7	8.7	.106 *	.105 **
Effective management of maintenance	4.7	5.0	7.3	.065 ^{ns} (p = .121)	.038 ^{ns} (P = .114)
Test and benchmark prices	7.5	7.6	7.0	.005 ^{ns}	.002 ^{ns}
Provide work the municipal cannot do	6.3	7.3	3.3	.142 **	.017 ^{ns}
Develop and renew areas and services	4.6	4.6	4.7	.000 ^{ns}	.000 ^{ns}
Develop internal organization and work routines	5.6	4.8	5.2	.024 ^{ns}	.010 ^{ns}
Level of contracting out (PPI, 2014)	25 %	46 %	85 %	.815 **	.760 **

Source: INOPS survey data (N = 68) and Statistics Denmark.

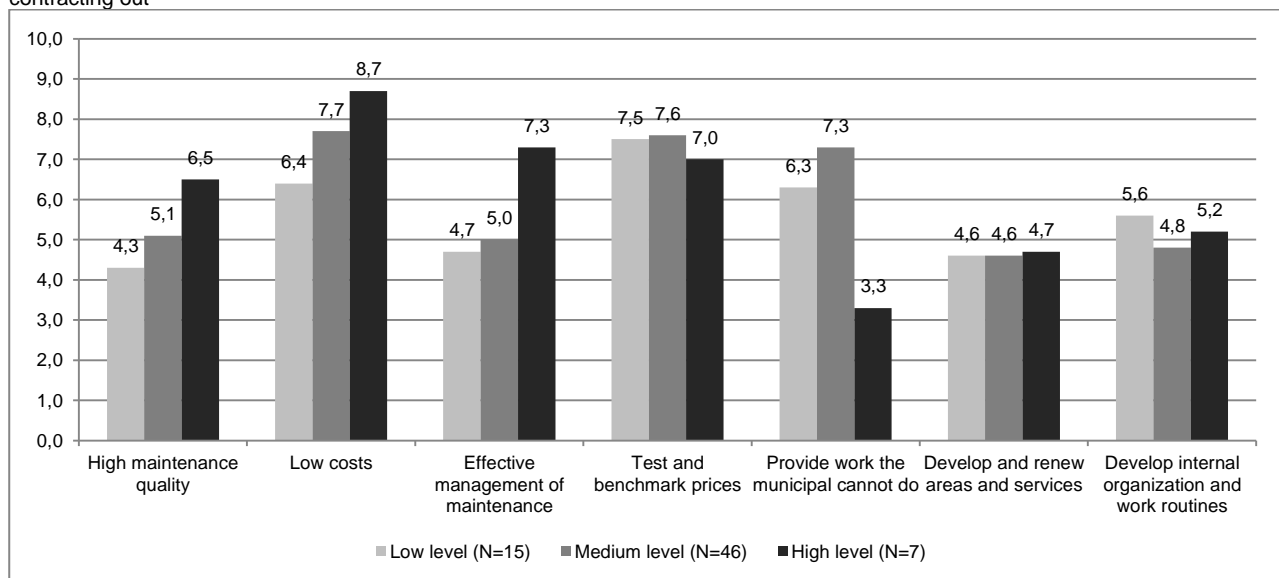
^a All items measured by an 11-point response-scale with anchors (0 = ‘not at all’ and 10 = ‘Very high degree’).

^b Score differences between groups (ETA SQ and test of linearity) are evaluated at significance levels (SPSS ANOVA): † p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Level of contracting out for parks and roads combined (measured by PPI, 2014): low = 0-33%, medium = 33-66% and high = 66-100%

Figure 12.

Comparison of differences in purposes for using private contractors between Danish municipalities with low, medium and high levels of contracting out



Although the differences between the contracting levels for the groups are not strictly a continuous scale (formally it is an ordinal scale) measures for linearity indicate that the purposes of *'high maintenance quality'*, *'low costs'* and *'effective management of maintenance'* are increasingly important when contracting levels increases. Additional correlational analysis of bivariate relations finds that the relation between contracting level and the three purposes all are positively and significantly correlated ($p < .1$).⁵⁰ Visual inspection of Figure 12 supports this finding.

Table 18.

Analysis of differences in purposes for using private contractors between municipalities in three different size categories

Importance of purpose ^a	Mean scores			Test of associations ^b	
	< 30,000 (N=14)	30,000 - 90,000 (N=45)	> 90,000 (N=8)	ETA SQ	Test for linearity (R ²)
High maintenance quality	4.3	4.8	7.0	.074 [†]	.040 ^{ns} (p = .111)
Low costs	7.8	7.4	7.4	.007 ^{ns}	.005 ^{ns}
Effective management of maintenance	5.0	4.8	7.4	.091 *	.038 ^{ns} (p = .109)
Test and benchmark prices	7.3	7.4	8.8	.042 ^{ns}	.023 ^{ns}
Provide work the municipal cannot do	7.4	6.8	4.6	.070 ^{ns} (p = .107)	.055 [†]
Develop and renew areas and services	5.0	4.3	5.6	.041 ^{ns}	.002 ^{ns}
Develop internal organization and work routines	5.0	4.8	6.4	.053 ^{ns}	.018 ^{ns}
Level of contracting out (PPI, 2014) ^c	42%	44%	42%	.005 ^{ns}	.001 ^{ns}

Source: INOPS survey data (N = 65) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'not at all' and 10 = 'Very high degree').^b Score differences evaluated at significance levels (SPSS ANOVA): [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant^c PPI = Private Purchase Index (Share of total municipal operational budgets spend on private vendors/contractors)

Table 18 shows an analysis of differences in the importance of seven purposes for using private contractors between municipalities with less than 30,000 inhabitants, 30,000–90,000 inhabitants and more than 90,000 inhabitants. The main findings in the analysis shown in Table 18 are supported by analysis of underlying bivariate correlations between municipal size and the seven purposes for all purposes except for *'low costs'*.⁵¹ The analysis of the bivariate correlation shows

⁵⁰ Values for Pearson's and significance in the bivariate analysis for the correlations between contracting levels (measured by PPI as a continuous variable) and *'high maintenance quality'*, *'low costs'* and *'effective management of maintenance'* are .209 (p = .097), .270 (p = .027) and .255 (p = .039). Bivariate correlations between contracting level and remaining purposes are all insignificant. However, the correlation between contracting levels and *'provide work the municipal cannot do'* are almost significant at p-level < .1, where Pearson's = -.201, p = .108. This indicates that this purpose is likely to be less important (i.e. the sign is negative for the correlation) for municipalities which contract out a larger percentage of their overall park and road maintenance budget.

⁵¹ Values for Pearson's and significance in the bivariate analysis for the correlations between municipal size and *'high maintenance quality'*, *'low costs'*, *'effective management of maintenance'* and *'provide work the municipality cannot do'* are .230 (p = .067), -.247 (p = .044), .234 (p = .059) and -.273 (p = .028). Bivariate correlations between contracting level and remaining purposes are all insignificant. In the bivariate analysis, municipal size is transformed to natural

that '*low costs*' has a decreasing importance for increasingly larger municipalities (Pearson's = -.247, $p = .044$). This finding indicates that the chosen categories for municipal size in the analysis shown in Table 18 are not properly 'portraying' the underlying bivariate relationship for this particular purpose ('*low costs*').

5.2.6 Explanatory analysis of purposes for using private contractors

Table 19 provides an explanatory analysis (based on OLS regression analysis) of the differences in the emphasis of seven purposes for using private contractors. Overall, the analysis shows that the emphasis on the various purposes is associated in various degrees with different strategic (the level administrative and political support for contracting out), organizational (organization of operational responsibilities and level of contracting out) and general municipal (size measured by number of inhabitants) characteristics. By inspecting and comparing the sizes of R^2 associated with models A - G it is clear that the analysis is better at predicting the purposes in model A to E and less so in predicting the purposes in model F and G (i.e. emphasis on respectively '*development of services / areas*' and '*develop organization*'). The low values of R^2 in model F and G indicate that other factors (not included in the model) might be expected to be better at predicting the two purposes related to development.

In particular, the analysis finds that the degree whether the use of contracting out is a political and / or administrative aim (strategic characteristics) is associated in different ways with the seven specific purposes for using private contractors. The importance of contracting out as an administrative aim is positively associated with the importance of '*high quality*', '*effective management*', '*test and benchmark prices*', '*development of areas and services*', and finally '*develop internal organization and routines*' as purposes for using private contractors. The degree whether contracting out is an administrative aim is furthermore negatively associated with the importance of '*low costs*' as the purpose for using private contractors i.e. the stronger contracting out is an administrative aim the less importance is '*low costs*' as a purpose for using private contractors.

logarithm due to strong skewness in the dataset, i.e. a few very large municipalities deviate from the average municipal size.

Table 19.
OLS regressions: Importance of seven purposes for using private contractors

	<i>Importance of purposes (model A-G) for using private contractors (scale 0-10)</i>						
	Model A High maintenance quality	Model B Low costs	Model C Effective management	Model D Test/benchmark prices	Model E Work municipal cannot do	Model F Develop services / areas	Model G Develop organization
<i>Predictor variables</i>	<i>Unstandardized beta-coefficients^a</i>						
Contract out is a political aim (scale: 0-10)	÷.119 (.151) ^{ns}	.043 (.107) ^{ns}	÷.126 (.141) ^{ns}	.219 (.125)[†]	-.109 (.165) ^{ns}	÷.018 (.136) ^{ns}	.179 (.132) ^{ns}
Contract out is an administrative aim (scale: 0-10)	.553 (.176)^{**}	÷.232 (.127) [†]	.637 (.166)^{**}	.311 (.148)[*]	.254 (.195) ^{ns}	.407 (.161)[*]	.351 (.156)[*]
Contracting level, measured by PPI (scale: 0 – 100) ^b	.190 (2.122) ^{ns}	3.448 (1.535)[*]	.446 (.2.018) ^{ns}	÷4.209 (1.789)[*]	÷3.127 (2.372) ^{ns}	÷1.903 (1.967) ^{ns}	2.763 (1.901) ^{ns}
Direct operational responsibility (yes=1 / no= 0)	÷ 1.348 (.742)[†]	÷.858 (.531) ^{ns}	÷ 1.729 (.698)[*]	÷.557 (.619) ^{ns}	1.867 (.821)[*]	÷.439 (.677) ^{ns}	.445 (.654) ^{ns}
Municipal size, inhabitants (natural log.)	.627 (.484) ^{ns}	÷.547 (.348) ^{ns}	.595 (.458) ^{ns}	.426 (.406) ^{ns}	÷ 1.292 (.542)[*]	÷.347 (.447) ^{ns}	.504 (.431) ^{ns}
N	63	65	65	65	64	63	63
VIF Max	1.332	1.324	1.324	1.324	1.329	1.306	1.306
Adjusted R ²	.180	.147	.269	.115	.167	.027	.094

Data sources; INOPS survey data for Denmark and Statistics Denmark.

Legend: † $p < .1$ (two-tailed). * $p < .05$ (two-tailed), ** $p < .01$ (two-tailed). ns = non-significant ($p > .1$)

^a Coefficients indicate the level of change in the dependent variable by a one unit scale increase in a predictor variable.

^b PPI = Private Purchase Index (Share in % of total municipal operational budgets spend on private vendors/contractors)

R² = the degree (ranging from 0 to 1) in which predictor variables 'explain' the variance in the dependent variable.

The degree whether contracting out is a political aim is only associated (positively) with 'test and benchmark prices'. The degree whether contracting out is a political aim is neither positively or negatively associated with the importance of the six remaining purposes. A higher degree of contracting out (measured by PPI) is positively associated with the importance of 'low costs' as purpose while negatively associated with the importance of 'test and benchmark prices' as purpose. Whose municipalities where the primary road and/or park manager has direct responsibilities for operational maintenance has less emphasis on 'high quality' and 'effective management' and more emphasis on the provision of 'work the municipal cannot provide' as purposes for using private contractors.

The explanatory analysis in Table 19 furthermore shows that those municipalities where 'high quality' is emphasized the use of private contractors is more important as an administrative aim and are more widespread in the group of municipalities where the primary road and/or park manager has no direct operational responsibilities (i.e. the manager is organizationally/administratively separated from in-house provision or no in-house provision exists).

Those municipalities where 'low costs' is emphasized the use of private contractors has lesser importance as an administrative aim, but has more importance in municipalities which contract out

a larger share of their maintenance services (measured as PPI). Those municipalities where ‘*effective management*’ is emphasized the use of private contractors has more importance as an administrative aim and the importance of ‘*effective management*’ is higher in the group that has no direct operational responsibilities. Those municipalities where ‘*test and benchmark of prices*’ has higher importance the purpose for using private contractors is more important as both a political and administrative aim as well as the importance of ‘*test and benchmark of prices*’ is higher in municipalities which contract out to a lesser degree. The importance of the purpose of ‘*provide work the municipal cannot do*’ is more pronounced in the group of municipalities where the manager has direct operational responsibilities as well as among smaller municipalities (measured by population size). Finally, the analysis shows that the importance of the purposes of ‘*development of areas and services*’ as well as the ‘*internal organization and routines*’ are more pronounced in municipalities where the use of private contractors is more important as an administrative aim.

In general the explanatory analysis shows that when the administrative level in the municipalities more strongly supports contracting out they also emphasize the use of private contractors for a range of particular and distinct purposes. Stronger support from the political level in the municipalities does not seem to result in a more refined or distinct emphasis in the use of private contractors expect for the purpose of ‘*test and benchmark prices*’.

Overall, the result from the explanatory analysis indicates that the administrative level uses contracting out for a refined set of purposes and this dependent on key organizational and municipal characteristics. The political level seems more ‘singular’ in the view on how private contractors should be used. The main political interest in the support for using private contractors is ‘*test and benchmark prices*’ which indicate that they are primarily concerned with getting services provided by the organizational arrangement which is economically most efficient. The more refined definition of the use of private contractors are delegated – or left – to the administrative level.

5.2.7 *Alternative explanatory analysis of purposes*

Ideological orientation has been found in several studies to be an important predictor of the propensity to contracting out. Table 20 shows a hierarchical OLS regression analysis which includes the variables in model B in Table 19 and adds a new variable for the influence of rightwing parties in the city council. The new variable is a composite construct based on the percentage of rightwing city councilors in the three foregoing election periods (weighted average for years 2005,

2009 and 2013).⁵² The similar analysis run (not shown) for all other purposes as response variable did not find any significant correlations between ideological orientation in the city council and the emphasis on purpose for using private contractors.

The results of the alternative analysis are somehow surprising.⁵³ In short the analysis finds that right-wing dominated city councils put less emphasis on low maintenance cost as purpose for contracting out than left-wing dominated city councils. The finding is stable across various models where additional variables are entered in the regression analysis (model A to F in Table 20). The finding may be interpreted in different ways.

Table 20.
Hierarchical OLS regression: Importance of low maintenance cost for the use of private contractors

	<i>Importance of low maintenance cost as purpose for the use of private contractors</i>					
	Model A	Model B	Model C	Model D	Model E	Model F
<i>Predictor variables</i>	<i>Unstandardized beta-coefficients (standard errors)^a</i>					
Right-wing influence in city council (0-100 pct.)	÷5.889 (2.028) **	÷7.278 (2.068) **	÷7.128 (2.045) **	÷7.426 (1.921) **	÷7.304 (1.905) **	÷7.228 (1.874) **
Contract out is a political aim (scale: 0-10)		.224 (.102) *	.260 (.104) *	.196 (.099) †	.161 (.101) ^{ns}	.148 (.100) ^{ns}
Contract out is an administrative aim (scale: 0-10)			÷.162 (.114) ^{ns}	÷.283 (.113) *	÷.257 (.114) *	÷.221 (.114) †
Contracting level, measured by PPI (scale: 0 – 100 pct.) ^b				4.336 (1.377) **	3.849 (1.404) **	3.761 (1.381) **
Direct operational responsibility (yes=1 / no= 0)					.708 (.484) ^{ns}	.776 (.478) ^{ns (p =.109)}
Municipal size, inhabitants (natural log.)						÷.541 (.313) †
N	65	65	65	65	65	65
VIF Max	1.000	1.103	1.172	1.252	1.327	1.329
R ² / Adjusted R ²	.118 / .104	.182 / .155	.208 / .169	.320 / .275	.344 / .288	.376 / .312

Data sources; INOPS survey data for Denmark and Statistics Denmark.

*Legend: † p < .1 (two-tailed). * p < .05 (two-tailed), ** p < .01 (two-tailed). ns = non-significant (p > .1)*

^a *Coefficients indicate the level of change in the dependent variable by a one unit scale increase in a predictor variable.*

^b *PPI = Private Purchase Index (Share in % of total municipal operational budgets spend on private vendors/contractors).*

One interpretation of the results could be that right-wing dominated city councils put relatively more emphasis on other purposes for using private contractors. A second interpretation could be that right-wing dominated city councils are better off (e.g. has a better tax base) and therefore do

⁵² The percentage of ‘right-wing city councillors’ include members from the political parties which traditionally supports neoliberal economic policies: Venstre, Konservative, Liberal Alliance, Dansk Folkeparti og Det Radikale Venstre. The variable can also be interpreted as the percentage which excludes left-wing city councillors including member from the political parties: Socialdemokratiet, Socialistisk Folkeparti, Enhedslisten / De Rød-Grønne as well as independent city councillors. Data source: DST.DK.

⁵³ Due to the unexpected findings the construction of the variable for ideological orientation of the city council was doubled checked.

not need to emphasize low maintenance cost as much as left-wing dominated city councils. An additional analysis including a variable for the tax base per inhabitant for various years did not, however, alter any of the results. A third interpretation could be that when left-wing dominated city councils use private contractors as alternative to in-house provision it need to have substantial benefits. For right-wing dominated city councils the use of private contracts may have a value in itself and do not depend so much upon whether it leads to substantial economic gains (i.e. lower cost).

In addition it is found in the analysis shown in Table 20 that controls for respectively the contracting level and the implementation of a disaggregated organization (measured as ‘no direct operational responsibilities’) – which both are two hall-mark characteristics of NPM-reforms – weakens the association between level of political support for contracting out and low maintenance cost as purpose for contracting out (the beta-coefficient is decreased and the association become non-significant at p-level $< .1$ in model C to E). In other words, political support for contracting out as a mean for achieving lower costs is higher in municipalities with lower degrees of contracting out and low organizational disaggregation.

6 ANALYSIS – ORGANIZING CONTRACTING OUT

6.1 Managing and organizing contracting out

This chapter investigates how contracting out of park and road maintenance services is managed and organized in Danish municipalities and delivers both country specific and comparative analysis across Denmark, Sweden, Norway and England. The chapter investigates both the organization of the formalized dimensions of contractual frameworks as well as ‘informal’ aspects related to behavioral norms between municipalities and their private contractors.

The chapter addresses the following four main questions:

- A. Are there differences in the procurement planning and management of maintenance contracts between Denmark, England, Sweden and Norway?
- B. How are contractual relations formally organized in Denmark, England, Sweden and Norway?
- C. What are the level of (informal) collaborative norms in contractual relations in Denmark, England, Sweden and Norway?
- D. Which factors explains inter-municipal differences in formal contractual frameworks?

6.1.1 Key findings

6.1.1.1 Procuring and managing contracts

The analysis finds several significant differences among the countries. The organizational capacity for contract management is found to be substantial higher in the UK and Denmark than in Sweden and Norway. The use of various types of analysis in procurement planning is furthermore significantly lower in Norway than in Denmark and Sweden. In particular, external consultants are used to a higher degree in Denmark than in Sweden and Norway. The use of control bids / calculation are furthermore widely used in Denmark compared to Sweden and Norway.

In the approach to managing contracts, municipalities in Denmark and Sweden put a significantly higher emphasis on operational specifications than Local Authorities in the UK and

municipalities in Norway. Local Authorities in the UK, on the other hand, have a higher degree of face-to-face meetings and communications with their contractors than municipalities in all Scandinavian countries. Overall, Local Authorities in the UK appear best adapted to managing contractual relations, followed by municipalities in Denmark, next to Sweden while municipalities in Norway, lastly, seem the least adapted.

6.1.1.2 Formal contract relations

Features in formal contracts implemented by Danish municipalities in their exchange relations with private contractors appear to be organized along two main dimensions. The first dimension concerns standard ‘transactional’ contract features such as juridical matters, service specification and access to economic sanctions. The second dimension concerns more innovative ‘relational’ contract features such as close collaboration and joint planning, contact with and involvement of users, competence requirements and specialized economic incentives. The transactional contract framework is in general more important than the relational contract framework in Danish municipalities’ exchange relations with their private contractors. However, there is a high degree of variations among municipalities in the relative importance they put on the two kinds of contract frameworks and relational contract features are commonly used.

Separate country analyses find that almost similar organizations of the formal contract are found in the UK, Sweden and Norway. However, each country has some minor variations compared to Denmark. In Norway, for example, competency requirements are not associated with any particular groups of contract features, while in Sweden; competency requirements are found to be associated with the group of transactional contract features. In the UK, some features are clearly associated with a core set of transactional features; a few features can be grouped as part of a core relational framework while other features are more loosely interrelated. In comparison with the three Scandinavian countries, the findings for UK indicate a more rich and varied landscape in how Local Authorities design formal contracts for regulating exchange relations with private contractors.

6.1.1.3 Informal contract relations

In earlier studies informal behavioral norms have been found to play an important for overall contractual performance. In Denmark, municipalities tend to score the institutionalization of mutual behavioral norms within their contractual relations with private contractors relatively high. In particular, the belief that ‘collaboration’ is necessary for both parties to be successful is found to be

highly institutionalized and widespread. ‘Flexibility’ in terms of the readiness of both parties to change circumstances for service provision to make work easier for one part is also a highly institutionalized behavioral norm. On the other hand, a more generative or ‘friendly’ trust-related norm in terms of the belief that it is alright to own one another a favor is less and more uneven institutionalized. However, a more passive trust-related norm in terms refraining from exploiting a partner’s weakness or mistake for own advantages is relatively highly institutionalized.

Across the four countries – UK, Sweden, Denmark and Norway, the analysis finds only small and insignificant differences in the level of institutionalization of behavioral norms. Only for Norway, the analysis indicates a notable difference for one out of six items measuring the informal norms. Trust, in terms of the belief that it is alright to own one another a favor is found to be substantially lower in Norway than in the three other countries.

6.1.1.4 Determinants of contract design

The analysis shows that contract design varies among Danish municipalities. In an analysis of the determinants of respectively transactional and relational features it is found that Danish municipalities deliberately design their contracts according to strategic purpose, contracting capacity, the scale of the tasks and the comparative advantages of relying on both internal (in-house) and external (private) provision.

Relational contract features are in particular emphasized in contract design when the contracting purpose is related to development of services and organizational. The finding indicates that contracts are designed for complementary purposes and not only for cost minimizing concerns. On the other hand, relational contract features are less emphasized when a municipality has an in-house provider hierarchical organized within the park and road administration. The finding indicates that some municipalities use contracting out for tasks requiring only little adaptation in combination with an in-house provision while municipalities which relies mainly on contracting out (or have a strong internal disaggregation of client and provider responsibilities) incorporates relational contract features to a greater extent in order to enable a capacity for continuous adaption within the contractual relationship.

Greater emphasis on transactional contract features is mainly associated with the scale of tasks (measured by the economic value). Contracts involving larger economic engagements rely on transactional contract features to a greater extent than contracts encompassing smaller economic

engagements. The use of external advice, such as consultants, in procurement processes is also associated with greater emphasis on transactional contract features as well as relational contract features. The finding indicates that involvement of external advice is used for designing contracts as well as the involvement results in more formalized exchange relations. In addition it is found that municipalities which have a higher contract management capacity also rely on more formal transactional contract features.

6.2 Managing contracting out

This section explores key aspects of how contracting out is managed in Denmark, Sweden, Norway and the UK. The section explores differences in analysis used in procurement planning, organizational capacity for contract management as well as approaches in contract management.

6.2.1 Use of analysis in procurement planning

Table 21 shows the importance of five types of analysis when municipalities procure park and road maintenance services in Denmark, Norway and Sweden. Denmark is used in the analysis as a reference country for comparison of means and test of the statistical significance of inter-country differences.

Table 21.

Scandinavian countries: The use of different types of analysis / instruments in public procurement of park and road maintenance services

Type of analysis ^a	Mean scores (standard deviations)								
	Denmark (N=61) ^b		Sweden (N=69)		Norway (N=60)		Three countries (N=189) ^c		Equality of variance ^d
Analysis of markets	5.5	(2.7)	5.6 ^{ns}	(2.1)	3.8 ^{**}	(2.8)	5.0 ^{**}	(2.5)	No
Analysis of own experiences	6.9	(2.3)	7.8 [*]	(1.3)	6.1 [†]	(1.9)	7.0 ^{**}	(2.0)	No
Advice / use of external consultants	6.3	(2.4)	4.3 ^{**}	(2.9)	3.3 ^{**}	(3.4)	4.6 ^{**}	(3.1)	No
Analysis of other municipalities experiences	5.9	(2.5)	6.0 ^{ns}	(2.4)	3.9 ^{**}	(2.6)	5.3 ^{**}	(2.6)	Yes
Analysis of legal and procurement options	7.0	(2.1)	7.0 ^{ns}	(2.5)	4.6 ^{**}	(2.9)	6.2 ^{**}	(2.7)	no

Source: INOPS survey data (no available data for UK).

^a All items measured by the respondent's agreement with the statement on an 11-point response scale with anchors (0 = 'not at all' and 10 = 'very high degree').

^b Denmark is used as a 'benchmark country' for comparison of differences with two other countries (ONE-WAY ANOVA with Tukey and Games-Howell post hoc test). Significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^d Levene's test for equality of variance, p-level = .05.

Within all three countries, municipalities use '*analysis of own experiences*' and '*analysis of legal and procurement options*' to a higher degree than the three other type of analysis. This indicates a relatively 'inward' orientation as well as the importance of compliance with legal regulations for public procurement (governed by national implementation of EU-laws) in the three countries. In Norway, however, the emphasis on analysis of: '*legal and procurement options*' is significant lower than the emphasis in Denmark and Sweden. The mean score difference for '*legal and procurement*

options' is 2.4 and statistically significant at p-level < .01 in comparison with both Denmark and Sweden.

In comparison, municipalities in Denmark use all types of analysis to a greater degree than municipalities in Norway. In a comparison between Denmark and Sweden, three out of five types of analysis are used to the same extent in the two countries. However, Danish municipalities use external consultants to a greater degree while Swedish municipalities put greater emphasis on own experiences in comparison with Denmark (as well as Norway). Municipalities in Sweden are the more 'introvert' in terms of the degree they use analysis of '*own experiences*' compared to municipalities in Denmark (mean score difference = .9, $p = .025$) as well as Norway (mean score difference = 1.7, $p < .01$). While Swedish municipalities seem more introvert and self-sufficient, Danish municipalities seems more 'extrovert' by their higher reliance on external consultants.

The lesser use of the various types of analysis among Norwegian municipalities in the comparison between Denmark and Norway is also found to be statistically significant in the comparison between municipalities in Sweden and Norway for all types of analysis except for '*advice / use of external consultants*' (mean score difference = 1.0, $p = .184$). Norwegian municipalities seems to be the most introvert by their high reliance on '*own experiences*' (mean score = 6.1), compared to other types of analysis, in particular the use of external consultants (mean score = 3.3), in their procurement planning.

Overall, the level of analysis in procurement planning can be said to be equal among Danish and Swedish municipalities while only differing in degree of the type of analysis they rely on. Municipalities in Norway clearly rely less on analysis in procurement planning compared to municipalities in Denmark and Sweden. One particular finding is that the use of external consultants is significantly higher in Denmark than in Sweden (mean score difference = 2.0) and Norway (mean score difference = 3.0).

6.2.2 Use of control bids in public procurements

Table 22 shows data for the use of control bids in public procurement of park and road maintenance services in the three Scandinavian countries. The number of valid replies was very low for Norway. The very low number of replies in Norway is interpreted as an indication of a very low use of control bids / calculations among Norwegian municipalities. For Sweden, a relative high number of respondents provided a valid reply. Only a fraction of the replies from Swedish municipalities

indicated that they used control bids / calculations. For Denmark, the data indicates that control bids / calculation is used by approximately one half of all municipalities when they procure park and/or road services. Overall the data indicates that control bids / calculations are mostly used in Denmark, while only used by a minority in Sweden and finally rarely used in Norway.

Table 22.
Scandinavian countries: Use of control bids / calculations in public procurements

	Number of municipalities using procurement	Valid N (replied on question) ^a	Number of municipalities indicating use of control bids	Interpretation
Norway (N=95)	56	8	5	Control bids is not commonly used
Denmark (N=75)	58	46	28	Control bids is used on one half of all cases
Sweden (N=115)	72	65	14	Control bids is used in a minority of cases
Scandinavia (N=285)	186	118	47	The use of control bids differs across the three Scandinavian countries

Source: INOPS survey data (no available data for UK).

^a The respondents were asked to indicate ('yes' or 'no') whether their municipality used control bid/calculation last time they procured park and/or road maintenance services.

6.2.3 Managing maintenance contracts

Table 23 shows a comparison of the importance of four different aspects in the management of parks and road maintenance contracts in the UK, Sweden, Norway and Denmark. The UK is used in the analysis as a reference country for comparison of means and test of the statistical significance of inter-country differences.

Table 23.
Four countries: Managing maintenance contracts

Aspect ^a	Means (standard deviations) ^c										Equality of variance ^d
	UK (N=56) ^b		Sweden (N=75)		Norway (N=74)		Denmark (N=67)		Four countries (N=271) ^c		
Adherence to 'hard sanctions' for non-compliance	5.0	(3.1)	4.3 ^{ns}	(2.5)	3.7 [*]	(2.8)	4.9 ^{ns}	(2.3)	4.4 [*]	(2.7)	Yes
Use of face-to-face meetings / communications	8.4	(1.8)	7.0 ^{**}	(2.5)	6.0 ^{**}	(2.4)	7.3 ^{**}	(1.8)	7.1 ^{**}	(2.3)	No
Focus on operational specifications	7.1	(1.9)	8.2 ^{**}	(1.9)	7.6 ^{ns}	(2.0)	8.3 ^{**}	(1.3)	7.8 [*]	(1.8)	Yes
Focus on strategic and long-term aims	7.8	(2.1)	7.2 ^{ns}	(2.1)	6.8 [†]	(2.3)	7.3 ^{ns}	(1.9)	7.3 [†]	(2.1)	Yes

Source: INOPS survey data

^a All items measured on a scale from 0 to 10 (0 = 'not at all', 10 = 'very high degree').

^b UK is used as a 'benchmark country' for comparison of differences between the four countries (ONE-WAY ANOVA with Tukey and Games-Howell post hoc test). Significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^d Levene's test for equality of variance, p-level = .05.

The comparison finds several significant differences between the countries. In particular, Local Authorities in the UK use *'face-to-face meetings / communications'* to a higher degree than the municipalities in Denmark, Sweden and Norway. The differences in mean scores for: *'face-to-face meetings / communications'* are statistically significant ($p < .01$) in comparison between the UK and all three Scandinavian countries. On the other hand municipalities in both Denmark and Sweden have a greater emphasis on *'focus on operational specifications'* than Local Authorities in the UK. The differences in mean scores for: *'focus on operational specifications'* are statistically significant ($p < .01$) in comparisons between the UK and Denmark and Sweden, but not in comparison with Norway.

The comparison also shows that municipalities in Denmark compared to municipalities in Norway to a greater extent use *'adherence to hard sanctions for non-compliance'* (mean difference = 1.15, $p = .059$), *'face-to-face meetings / communications'* (mean difference = 1.3, $p < .01$) and a *'focus on strategic and long-term aims'* (mean difference = .7, $p = .107$). On the other hand, the emphasis on the four aspects in the management of contracts is very similar in Denmark and Sweden.

6.2.4 Organizational capacity for contracting out

Table 24 shows a comparison of the organizational capacity for contracting out in Local Authorities in the UK and municipalities in Denmark, Sweden and Norway. The UK is used in the analysis as a reference country for comparison of means and test of the statistical significance of inter-country differences.

Table 24.
Four countries: Organizational capacity for contracting out

Aspect ^a	Means (standard deviations) ^c						Equality of variance ^d
	UK (N=55) ^b	Sweden (N=68)	Norway (N=71)	Denmark (N=65)	Four countries (N=259) ^d		
Sufficient organizational resources (time and staff)	5.7 (2.6)	4.6 ^{ns} (p=.107) (2.8)	4.1 ** (2.9)	5.7 ^{ns} (2.5)	5.0 ** (2.8)	Yes	
Sufficient knowledge and experience	8.0 (1.9)	6.9 * (2.0)	6.6 ** (2.5)	7.4 ^{ns} (1.8)	7.2 ** (2.1)	No	
Sufficient methods and systems (IT, GIS)	7.0 (1.9)	6.6 ^{ns} (2.5)	5.4 ** (2.8)	7.3 ^{ns} (1.8)	6.5 ** (2.5)	No	
Sufficient routines and procedures	7.5 (1.5)	6.2 ** (2.3)	5.4 ** (2.4)	7.0 ^{ns} (1.9)	6.5 ** (2.2)	No	

Source: INOPS survey data

^a All items measured on a scale from 0 to 10 (0 = 'not at all', 10 = 'very high degree').

^b UK is used as a 'benchmark country' for comparison of differences between the four countries (ONE-WAY ANOVA with Games-Howell post hoc test). Significance levels: [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant.

^c Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^d Levene's test for equality of variance, p-level = .05.

For all countries, '*organizational resources*' are less sufficient than the three other organizational aspects. The statistics for standard deviations furthermore indicate that the organizational resources are very insufficient for substantial groups of municipalities / Local Authorities in all countries. The mean scores for sufficiency of '*organizational resources*' are furthermore significantly higher among Local Authorities in the UK (mean score = 5.7) and municipalities in Denmark (mean score = 5.7) than among municipalities in Norway (mean score = 4.1) and Sweden (mean score = 4.6).

The comparison shows that the Local Authorities in the UK have an overall greater capacity for managing contracts than municipalities in Sweden and Norway. The mean differences are greatest between the UK and Norway. No statistically significant differences are found in the capacity between municipalities in Denmark and Local Authorities in the UK. The mean differences between municipalities in Denmark and municipalities in Norway are statistically significant ($p < .01$) for '*organizational resources*', '*methods and systems*', and '*routines and procedures*'. However, the difference for '*knowledge and experience*' is not significant ($p = .153$). The mean differences between municipalities in Denmark and municipalities in Sweden are statistically significant for '*organizational resources*' ($p < .091$). The mean differences are not significant for '*knowledge and experience*' ($p = .485$), '*methods and systems*' ($p = .216$), and '*routines and procedures*'. ($p = .127$). The mean differences between municipalities in Sweden and Norway are only significant for '*methods and systems*' ($p = .061$).

In general, the comparison indicates that the sufficiency of organizational capacities for managing maintenance contracts are highest among Local Authorities in the UK and municipalities in Denmark while the sufficiency is a little less among municipalities in Sweden and lowest among municipalities in Norway.

6.3 Organization of contractual relations

The first parts of this section explore the levels and variations in formal and informal organization of contractual relations used managing private providers of park and road maintenance in Danish municipalities. The end of section explores variations in the formal organization of contractual relations in respectively Sweden, Norway and the UK.

6.3.1 Formal contract relations in Danish municipalities

Earlier research shows that contractual frameworks used for provision of park maintenance vary in their formalized characteristics. Lindholst (2009) found that the ‘contractual infrastructure’ in park maintenance contracts broadly relied on more than 40 different ‘instruments’ which could be grouped into about 15 different approaches for managing different contractual functions, e.g. ‘monitoring’ and ‘specification’. The variations in ‘instruments’ and ‘approaches’ were furthermore found to be aligned with three different types of overall ‘contractual arrangements’. The general literature highlights two key types of relations with the private sector. One characterized as ‘partnerships’ and one characterized as ‘transactional contracts’ (e.g. Sullivan and Skelcher, 2002).

The INOPS survey provides insights into the importance of the use of eight key contract dimensions which covers key features from the different types of contractual arrangements, including standard as well as more collaborative approaches to contracting out.

Table 25.

Denmark: Formal contract dimensions for managing and organizing provision of park and road maintenance services by private contractors

Importance of formal dimension ^a	Descriptive statistics		
	N	Mean	S.D.
<i>Juridical clauses / agreement (§§)</i>	67	7.8	2.3
<i>Service specification based on quantities, instruction and performance measures</i>	67	7.7	2.3
<i>Formal sanctions in case of non-compliance</i>	67	6.7	2.9
<i>Competence requirements</i>	67	6.6	2.4
<i>Service specification based on functionality and purpose</i>	66	6.4	3.0
<i>Formal collaboration and joint planning</i>	66	6.0	3.0
<i>Contractor's involvement / contact with users</i>	65	2.9	2.8
<i>Economic incentives for investment, improvements and optimization</i>	66	2.8	2.8

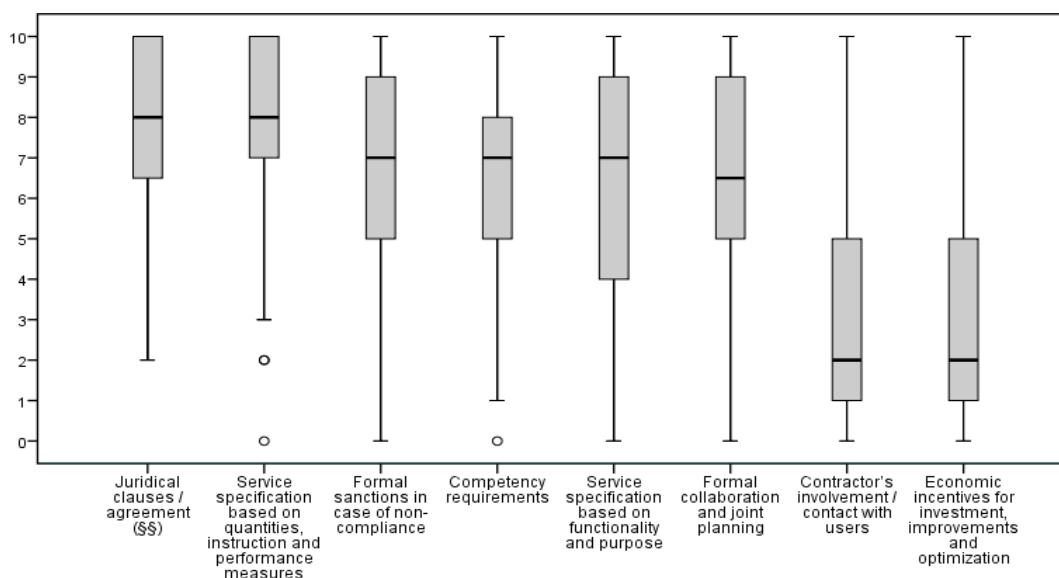
^a All items measured on a scale from 0 to 10 (0 = ‘not at all’, 10 = ‘very high degree’) on the question. “On a scale from 0 to 10, please indicate in which degree the following content is a central part of your department's arrangements with private contractors”.

Table 25 shows the importance of eight formal contract dimensions in Danish municipalities’ relations with private providers of park and road maintenance. Two dimensions are generally found to be very important. These dimensions include ‘*juridical clauses / agreement (§§)*’ (mean score = 7.8) and ‘*service specification based on quantities, instruction and performance measures*’ (mean score = 7.7). Four other dimensions are found to be of medium importance. These dimensions include ‘*formal sanctions in case of non-compliance*’ (mean score = 6.7), ‘*competence*

requirements' (mean score = 6.6), *'service specifications based on functionality and purpose'* (mean score = 6.4) and *'formal collaboration and joint planning'* (mean score = 6.0). Dimensions related to alternative contractual approaches, including *'contractor's involvement / contact with users'* and *'Economic incentives for investment, improvements and optimization'* are on the average found of less importance (both mean scores below 3.0).

The figures for standard deviations in Table 25 show that the inter-municipal differences in general are high (ranging from 2.3 to 3.0). The highest levels of inter-municipal differences are found for *'formal collaboration and joint planning'* (S.D. = 3.0) which indicates that the scores for 66 % of the municipalities lies between 3.0 and 9.0 and for *'service specifications based on functionality and purpose'* (S.D. = 3.0) which indicates that the scores for 66 % of the municipalities lies between 3.4 and 9.4. The inter-municipal differences are smallest for *'juridical clauses / agreement (§§)'* (S.D. = 2.3) and *'service specification based on quantities, instruction and performance measures'* (S.D. = 2.3).

Figure 13. Formal contract dimensions for managing and organizing provision of park and road maintenance by private contractors in Denmark (boxplots)



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled boxes represent 50 % of the cases, the top of the box represents the 75 % quartile and the bottom the 25 % quartile. The middle of the box represents the median value (or the 50 % quartile). 95 % of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The information given by the boxplots in Figure 13 provide further insights into the high levels of inter-municipal differences reported in Table 25. Similar to the figures on standard deviations, the

boxplot shows least variation among the municipalities for the importance of *'juridical clauses / agreement (§§)*' and *'service specification based on quantities, instruction and performance measures'* compared to the other six other contract dimensions. This indicates that there is relatively higher agreement (less difference) among the municipalities on the importance they put on these contract dimensions than the other six contract dimensions. A few 'outliers', i.e. municipalities which strongly deviate from the median value, contribute to some of the variance in the importance of *'service specification based on quantities, instruction and performance measures'* as well *'competency requirements'*.

The boxplots also show that although the average scores for some contract dimensions are relatively low still some municipalities scores these dimensions higher. For example, 25 % of the municipalities give score between 6 and 10 for *'contractor's involvement / contact with users'* and *'Economic incentives for investment, improvements and optimization'*. In other words, substantial groups of municipalities evaluate these dimensions as having relatively high importance in their contractual frameworks. Likewise the boxplots also shows that significant groups of municipalities finds some contract dimensions, e.g. *'service specifications based on functionality and purpose'*, of less importance (i.e. scores for the first quartile range between 0 and 4 or 5).

Overall, the analysis shows a large degree of inter-municipal differences in the importance of the eight contract dimensions. In particular, the analysis shows that all contract dimensions are important for either smaller or larger groups of municipalities. However, some contract dimensions are clearly more widespread and the importance of these dimensions varies less among the municipalities. The findings also indicate that more complex contractual arrangements haven't found a widespread use for private provision of park and road maintenance services (at the sector level). The dominant features in the contractual frameworks engaging with private providers for provision of road and park maintenance relies on well-tried contractual features, though a minor group of municipalities have adopted more 'alternative' contract features.

6.3.1.1 Two types of formal frameworks

Further statistical analysis (factor analysis) of data for Denmark shows that the eight contract dimensions can be grouped into two more general 'factors', i.e. some dimensions can be said to be 'belong' or 'go' together when they are used by the Danish municipalities.

Factor analysis

An explorative factor analysis was carried out with the aim of identifying any potential ‘factors’ which could be used for constructing composite scores for the eight items measuring the level of formalized contract framework.

The ‘factorability’ of the eight items, i.e. suitability of factor analysis, was initially assessed by standard criteria. Diagnosis statistics indicate that factor analysis is appropriate. The ratio between the total number of available cases for factor analysis (N = 64, listwise) and the number of items (8) is reasonable for explorative factor analysis (a ratio > 5) but not ideal (a ratio > 20). All items are correlated to several other items in some degree (>.4), indicating that all items share some common variance with other items, and anti-image correlations (diagonals) are all well above the recommended minimum of .500 (>= .746). Kaiser-Meyer-Olkin of sampling adequacy is .833 (well above the recommend minimum value of .500) and Barlett’s test of sphericity is also significant ($\chi^2(28) = 228.216, p < .001$). The factor analysis was run as a principal component analysis (PCA) with direct oblimin rotation. The PCA method is suitable for explorative factor analysis where the purpose is to identify composite constructs for further analysis. The chosen rotation method allows correlations to co-exist between extracted factors. Main results from the factor analysis are shown in Table 26.

Table 26.

Factor loadings and communalities based on a principal component analysis with oblimin rotation for 8 survey items on formalized contract features

Items	Primary factor loadings and communalities ^a		
	Formalized transactional contract framework (TCF)	Formalized relational contract framework (RCT)	Communalities
Juridical clauses / agreement (§§)	.930		.791
Service specification based on functionality and purpose	.679		.650
Service specification based on quantities, instruction and performance measures	.917		.771
Formal sanctions in case of non-compliance	.777		.749
Formal collaboration and joint planning	(.301)	.562	.577
Contractor’s involvement / contact with users		.774	.600
Economic incentives for investment, improvements and optimization		.898	.710
Competence requirements		.668	.523

^a N = 64 (list wise) Two factors extracted (Eigenvalues > 1). Factor loadings below .3 are suppressed. Solution extracted in 6 iterations. Secondary factor loadings in brackets.

Two factors with Eigenvalues above 1 were extracted. The two extracted factors explain a total of 67 % of the total inter-item variance. The first factor, labeled *‘formalized transactional contract*

framework', explains approximately 53 % of the variance while the second factor, '*formalized relational contract framework*', explains approximately 14 % of the variance. The correlation between the two factors is .501. The internal consistency (reliability) of the underlying items in the two factors was checked by analysis of values for Cronbach's Alpha. The Alpha value was good for items included in the first factor (Alpha = .870) while moderate for items included in the second factor (Alpha = .764). Values for Alpha could furthermore not be improved by removing any items included in the two extracted factors.

The theoretical interpretation of the two factors was assisted by research reported in Lindholst (2009) and the general literature on contracting out and public-private collaboration in the public sector. The first factor is clearly related with the standard contract features of transactional (or 'discrete') economic exchange. The second factor is similarly clearly associated with newer (or 'extended') contract features introduced as part of new public governance reforms which has emphasized partnerships and collaboration as key features in public-private relations. As also suggested by Lindholst (2009) the formal features are not mutual exclusive and in practice they are combined and integrated in contract frameworks in various degrees.

Composite scores were created for both factors, based on simple summative scores for the corresponding items which had their primary loading on the respective factor. Descriptive statistics for the composite (index) constructs are shown in Table 27.

Table 27.
Descriptive statistics for index constructs: formalized transactional and relational contract framework (TCF and RCF)

Constructs ^a	Descriptives					
	No. of items	Mean (S.D) ^b	Min-Max value	Skewness	Kurtosis	Alpha
Formalized transactional contract framework (TCF)	4	7.17 (2.25)	1.25-10.00	-.607	-.326	.870
Formalized relational contract framework (RCT)	4	4.60 (2.10)	.50-10.00	.158	-.075	.764

^a N = 65

^b Scale: 0-10 (where 0='not at all' and 10='in very high degree' in the scales used in the original items).

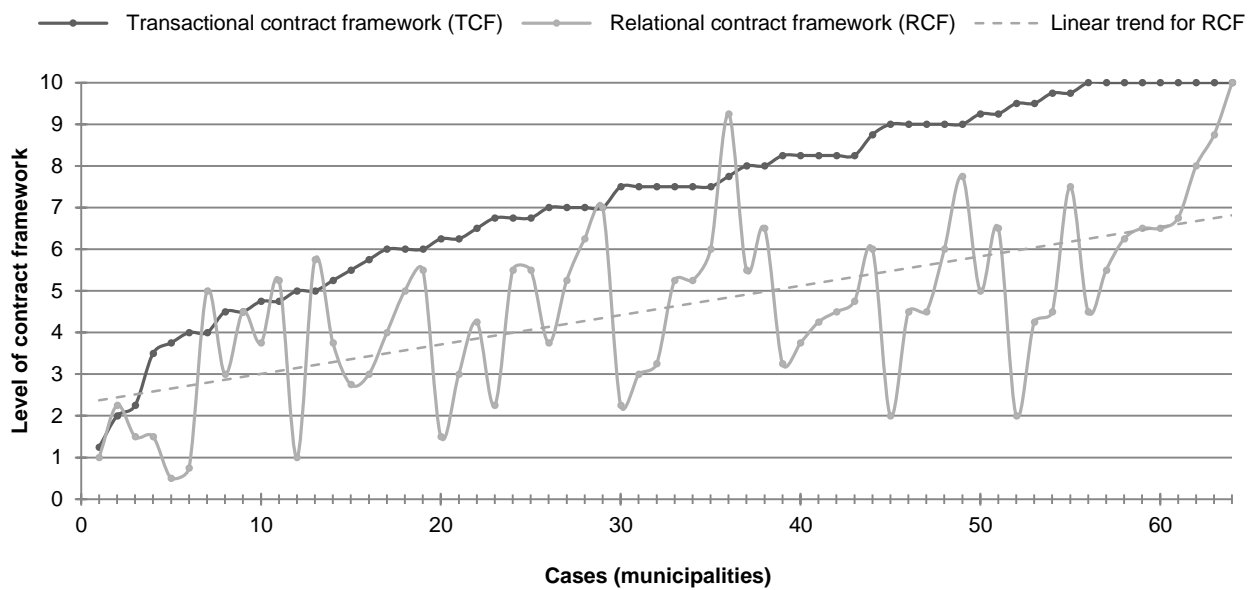
The correlation (Pearson's) between the two composite constructs (TCF and RCF) is .602 ($p < .001$, two tailed). Values for skewness and kurtosis indicate whether the two constructs can be regarded as approximately normal distributed. The construct for the level of formalized transactional contract framework is strongly left skewed (skewness = -.607), e.g. has a long 'thick' left tail and cannot be regarded as normally distributed around the mean value. The construct for the level of formalized

relational contract framework is right skewed in some degree (Skewness = .158) but can still be regarded as normally distributed.⁵⁴

6.3.1.2 *Inter-municipal variations in formal contract framework*

The levels of formalized transactional and relational contract frameworks used for organizing relations with private providers of park and road maintenance vary across Danish municipalities (see also Table 27). Figure 14 shows a graphical presentation of the inter-municipal variations. The presentation orders the cases (municipalities) from left to right by the level of formalized *transactional* contract framework.

Figure 14. Graphical presentation of variations in the level of formalized transactional and relational contract frameworks used by Danish municipalities for organizing relations with private providers of park and road maintenance



Graphical presentation of *variations* in the level of formal contract framework (transactional and relational) in Danish municipalities' relations with private contractors delivering road and park maintenance services. Cases organized by their overall level of contract framework (from low to high). N=64.

Visual inspection of the graphical presentation in Figure 14 shows that only for few cases (7 out of 64 municipalities) the scores for the level of formalized *relational* contract framework are higher than or equals the scores for the level of formalized *transactional* contract framework. The graphical presentation in Figure 14 also shows that in most cases the formalized *transactional*

⁵⁴ Tests for normality (Kolmogorov-Smirnov and Shapiro-Wilk) support conclusions on normality. Both tests are significant for TCF and insignificant for RCF.

contract framework is substantially more important than the formalized *relational* contract framework and the level of formalized *relational* contract framework varies to a good extent for groups of cases with approximately the same level of formalized *transactional* contract framework. However, a high correlation (Pearson's $r = .602$, $p < .001$) between the two types of frameworks for all cases is also evident in the graphical presentation. The tendency (marked by the linear trend line for RCF in Figure 14) shows that on the average, a higher level of formalized *transactional* contract framework also involves a higher level of formalized *relational* contract framework (and vice versa).

Overall the analysis highlights that the formalized *relational* contract framework partly is an 'add on' to the formalized *transactional* contract framework, and partly that the level of formalized *relational* contract framework increases with higher levels of formalized *transactional* contract framework (a degree of co-variation).

6.3.2 Informal contractual relations in Denmark

Theory and extensive research has highlighted the importance of informal relations and norms, including trust, for the performance of contractual governance and relations (Macneil, 1980; Cannon et al, 2000; Campbell, 2001; Poppo et al, 2002; Brown and Potoski, 2007, Fernandez, 2007; 2009).

The INOPS survey used altogether six items for measurement of the degree of the mutual institutionalization of behavioral (informal) norms in relations between municipalities and their private contractors which provide park and road maintenance services. The respondents were asked to indicate the degree they agreed with six different statements. The degree of mutual institutionalization was measured on an 11-point response scale where 0 = 'not at all' and 10 = 'very high degree'. Table 28 shows the operationalization of the six behavioral norms as well as key statistics for the six items. Operationalization of the six items is based on an adaption of measures used in earlier research. The six dimensions are for convenience labeled to more shorthand terms: '*collaboration*', '*mutuality*', '*flexibility*', '*lack of opportunism*', '*trust*', and '*solidarity*'. It should be noted that the item '*lack of opportunism*' can be interpreted as a second measure for trust (see also discussion below).

Table 28.
The degree of institutionalization of behavioral norms in relations with private contractors (Denmark)

Dimension of behavioral norms ^a		Descriptives		
Construct	Operationalization	N	Mean	S.D.
'Collaboration'	"We both believe that collaboration is necessary for each of us can be successful"	68	8.1	1.4
'Mutuality'	"We are both concerned whether our partner achieves her aims",	66	6.6	2.2
'Flexibility'	"We are both ready to change circumstances for service provisions if it makes the work easier for one part"	66	7.5	1.7
'Lack of opportunism'	"None of us would exploit a weakness or mistake by the other for own advantage"	64	6.8	2.2
'Trust'	"We both think it is alright to own one another a favour"	64	5.4	2.7
'Solidarity'	"We both believe that problem-solving is a joint responsibility regardless who of us that has the blame".	66	6.8	2.3

N = 68

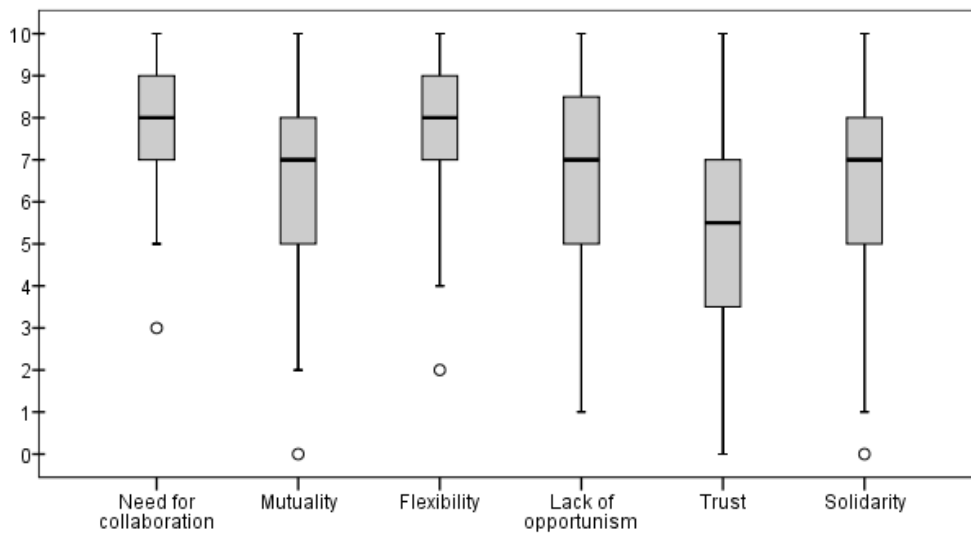
^a All items measured by the respondent's agreement with the statement on an 11-point response scale with anchors (0 = 'not at all' and 10 = 'very high degree').

The analysis shows that '*collaboration*' (mean score = 8.1) and '*flexibility*' (mean score = 7.5) characterize the relations with private contractor in relatively high degrees while '*trust*' (mean score = 5.4) characterize the relations in a lower degree. The analysis furthermore shows relatively little variation among the municipalities in the institutionalization of the norm for '*collaboration*' (S.D. = 1.4) while relatively high level of variation is found for '*trust*' (S.D. = 2.7). However, theoretically, the measure for '*lack of opportunism*' (mean score = 6.8, S.D. = 2.2) may also be interpreted as an expression of trust in terms of a willingness to be vulnerable to another party (see Rousseau et al., 1998: 395).⁵⁵

The information given by the boxplots in Figure 15 provide further information on inter-municipal differences reported by standard deviations in Table 28. Similar to the figures on standard deviations, the boxplot shows least variation among the municipalities for the importance of '*need for collaboration*' and '*flexibility*' compared to the other four other norms. This indicates that there is relatively lesser difference among the municipalities (and their private providers) in the level of institutionalization of these two norms compared to the other four norms. A few 'outliers', i.e. municipalities which strongly deviate from the median value, contribute to some of the variance in the level of institutionalization of norms related to '*collaboration*', '*mutuality*', '*flexibility*' as well '*solidarity*'.

⁵⁵ After reviewing research on trust in a number of different fields Rousseau et al. (1998) found that many definitions of trust center on a person's willingness to be vulnerable to another party. Rousseau et al. proposed a 'cross-disciplinary' definition of trust, which states that "trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions of another" (Rousseau et al., 1998: 395).

Figure 15. Level of institutionalization of informal contract norms in contractual relations between Danish municipalities and private providers of park and road maintenance (boxplots)



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled boxes represent 50% of the cases, the top of the box represents the 75% quartile and the bottom the 25% quartile. The middle of the box represents the median value (or the 50% quartile). 95% of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The boxplots also show that although the average scores for some informal norms are relatively low still some municipalities score the institutionalization of these norms higher. For example, 25% of the municipalities give scores between 7 and 10 for 'trust' while the median value is 5. In other words, significant groups of Danish municipalities evaluate this norm as being relatively more institutionalized in their contractual relations with private providers. Likewise the boxplots also shows that significant groups of municipalities find some norms, e.g. 'trust', less institutionalized (i.e. scores for the first quartile range between 0 and 4).

6.3.2.1 Two set of informal norms

Further statistical analysis (factor analysis) of the data from Danish municipalities shows that the six contractual norms can be grouped into two more general 'factors', i.e. some norms are 'bundled' together.

Factor analysis

An explorative factor analysis was carried out with the aim of identifying any potential 'factors' which could be used for constructing or validate composite scores for the six items measuring the level of institutionalization of informal contractual norms.

The ‘factorability’ of the six items, i.e. suitability of factor analysis, was initially assessed by standard criteria. Diagnosis statistics indicate that factor analysis was appropriate. The ratio (> 10) between the total number of available cases for factor analysis ($N = 61$, listwise) and the number of items (6) is reasonable for explorative factor analysis (which should be a ratio > 5) but not ideal (which should be a ratio > 20). All items are correlated to several other items in some degree ($p > .4$), indicating that all items share some common variance with other items, and anti-image correlations (diagonals) are all above the recommended minimum of .500 (all expect one are $> .700$). Kaiser-Meyer-Olkin of sampling adequacy is .678 (above the recommend minimum value of .500) and Barlett’s test of sphericity is also significant ($\chi^2 (15) = 126.316$, $p < .001$).

The factor analysis was run as a principal component analysis (PCA) with oblimin rotation. The PCA method is suitable for explorative factor analysis where the purpose is to identify composite constructs for further analysis. The chosen rotation method allows correlations to co-exist between extracted factors. Main results from the factor analysis are shown in Table 29. Two factors with Eigenvalues above 1 were extracted. The two extracted factors explain a total of 69 % of the total inter-item variance. The first factor, labeled ‘proactive contract norms’ explains approximately 51 % of the variance while the second factor, reactive contract norms, explains approximately 18 % of the variance. The correlation between the two extracted factors is .373. The relatively low level of communality, i.e. variance explained by the factors, for ‘solidarity’ (.585) and its relatively high secondary factor loading (.384) might raise a little concern regarding the reliability of the second factor (reactive collaborative norms).

Table 29.

Factor loadings and communalities based on a principal component analysis with oblimin rotation for 6 survey items on informal contractual norms

Items	Primary factor loadings and communalities ^a		
	Proactive collaborative norms	Reactive collaborative norms	Communalities
‘Collaboration’	.980		.850
‘Mutuality’	.735		.632
‘Flexibility’	.736		.713
‘Lack of opportunism’		.717	.621
‘Trust’		.890	.716
‘Solidarity’	(.384)	.533	.585

^a $N = 61$ (list wise) Two factors extracted (Eigenvalues > 1). Factor loadings below .3 are suppressed. Solution extracted in 7 iterations. Secondary factor loadings larger than .3 are shown in brackets.

The internal consistency (reliability) of the underlying items in the two factors was checked by analysis of values for Cronbach's Alpha. The Alpha value was good for items included in the first factor (.790) while acceptable for items included in the second factor (.676). Values for Alpha could be slightly improved by removing the item of 'mutuality' (resulting in an increase to .804) in the first factor (proactive collaborative norms) while no improvements would accrue from removing any items included in the second factor (reactive collaborative norms).

Overall, the factor analysis shows that the six items can be grouped into two composite constructs each based on three survey items. However, an index variable based on all six items are also found to have a good internal consistency (Cronbach Alpha = .784). The internal consistency could be slightly improved (Alpha = .793) by removing one item ('trust'). Factor analysis (PCA, direct oblimin, Eigenvalues > .1) based on the five remaining items did only extract one underlying factor which explained 57 % of the total variance.

Earlier studies of collaborative norms in the context of contractual relations have not reported on any underlying factors in composite constructs based on roughly similar worded and number of items (Cannon et al, 2000, Poppo and Zinger, 2002, Fernandez, 2007). The interpretation of the two factors (based on three items each) is therefore explored post hoc (retrospectively). In a retrospective interpretation the items in the two composite constructs can be argued to be expressions of respectively a more '*proactive*' set of behavioral norms and a more '*reactive*' set of behavioral norms in a contractual relationship. The three items in the proactive set can be argued to be oriented to more initiating, forward-looking and active behaviors toward improvement while the three items in the reactive set can be argued to be more oriented toward past actions, status quo, refrain from action (non-action) and addressing failure. Furthermore, two items in the reactive set of norms may both be interpreted as different expressions of trust (see above). This interpretation may also involve an assumption on the dynamics between the two constructs. In particular, reactive norms may be institutionalized through successful enactment of proactive norms (e.g. active collaboration with satisfactory outcomes will built up trust between two contracting parties). However, the nature of the data (cross-sectorial survey data) allows only for explorative test of this assumption. A more robust test design would require truly time-ordered (longitudinal) data for each case. However, a short explorative test is provided in Table 30. The test is based on the procurement history, in terms of the number of procurements rounds in last ten years within either parks or roads, as an indicator for a time effect. The test does not control for other potentially influential factors

(which also might explain the differences in the level of norms) such as the level of contracting out or contracting purposes for the various groups with difference procurement histories.

Table 30.

Comparisons of the levels of proactive and reactive collaborative norms at different numbers of past procurements.

Number of procurements in the last ten years	Proactive collaborative norms			Reactive collaborative norms			Mean difference ^a
	Mean	S.D.	N	Mean	S.D.	N	
All	7.5	1.5	108	6.4	1.9	102	1.1 (p < .001)
1	8.6	1.0	17	7.2	1.9	15	1.4 (p < .001)
2	7.8	1.6	13	6.9	1.8	13	0.9 (p = .070)
3	7.0	1.5	15	6.9	1.6	12	0.1 (p = .891)
4 or more	7.3	1.4	63	6.0	1.9	62	1.3 (p < .001)
Linearity (R ²)	.090 (p = .004)			.067 (p = .009)			
ETA SQ	.122 (p = .001)			.075 (p = .054)			

Note: Analysis run with pooled dataset (i.e. a municipality is divided into a case for roads and a case for parks) as data for the number of past procurements is separate for parks and roads.

^a Mean differences between proactive and reactive collaborative norms evaluated with one sample t-tests (similar results for significance levels are obtained by running the analysis with paired t-tests).

At face-value the tests provided in Table 30 shows an overall decline in the level of institutionalization for both types of collaborative norms when the number of procurement rounds increases. The linear association of the declining effects are statistical significant for both set of norms (p < .01). This could be interpreted as a tendency that municipalities start out with high expectations and levels of trust which eventually deteriorates over time (or at least differ between groups with different procurement histories). It should be noted that the change in level of collaborative norms from 3 to 4 (or more) procurements is non-significant for proactive collaborative norms and significant for reactive collaborative norms (one-way anova with post hoc tests, statistics not shown).

In sum, the analysis in the level of both set of norms between the groups with different levels of procurement history in the range 1 to 3 past procurements rounds supports the conclusion that differences between the levels of the two set of norms should diminish over time. However, the change in the difference in the level of the two set of norms between the groups with 3 and 4 past procurement rounds (which change from statistically non-significant, p = .891, for the group with 3 past procurement rounds to statistically significant, p < .001, for the group with 4 or more past procurement rounds) run counter to the overall conclusion.

Composite scores were created for both extracted factors, based on simple summative scores for the corresponding items which had their primary loading on the respective factor (i.e. each

construct is based on three items). In addition a composite score was created for a six items index construct. Descriptive statistics for the composite (index) constructs are shown in Table 31.

Table 31.
Descriptive statistics for index constructs: level of institutionalization of informal collaborative norms (proactive and reactive)

Constructs ^a	Descriptives					
	No. of items	Mean (S.D) ^b	Min-Max value	Skewness	Kurtosis	Alpha
Proactive collaborative norms	3	7.67 (1.48)	3.67-10.00	-.455	-.209	.790
Reactive collaborative norms	3	6.33 (1.86)	1.67-10.00	-.209	-.216	.676
Six item construct for collaborative norms	6	6.87 (1.46)	4.17-10.00	.006	-.755	.784
Five item construct for collaborative norms	5	6.90 (1.41)	4.00-10.00	.064	-.712	.793

^a N = 65

^b Scale: 0-10 (where 0='not at all' and 10='in very high degree' in the scales used in the original items).

The correlation between the two 'three item' composite constructs (proactive and reactive collaborative norms) is high (Pearson's $s = .527$, $N=61$, $p < .001$, two tailed). Values for skewness and kurtosis indicate whether the constructs can be regarded as approximately normal distributed. The constructs based on six and five items shows very little deviance from a normal distribution (skewness = $.006$ and $.064$). The construct for the level of institutionalization of proactive norms is left skewed (skewness = $-.455$), i.e. has a long 'thick' left tail and cannot be regarded as normally distributed around the mean value. The construct for the level of institutionalization of proactive norms is left skewed in some degree (skewness = $-.209$), but can still be regarded as normally distributed according to further statistical tests.⁵⁶

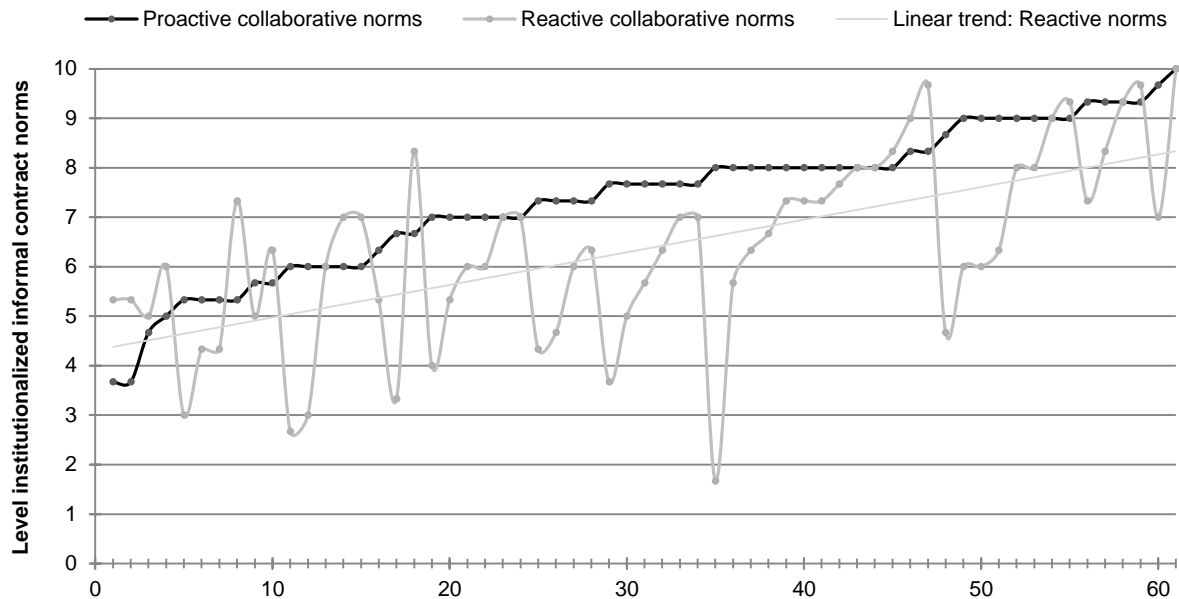
6.3.2.2 Inter-municipal variations in informal contractual norms

The levels of institutionalization of proactive and reactive norms in contractual relationships with private providers of park and road maintenance are found to vary across Danish municipalities (see also Table 31). Figure 16 shows a graphical presentation of the inter-municipal variations. The presentation orders the cases (municipalities) from left to right by the level of institutionalized proactive collaborative norms (from low to high).

⁵⁶ Tests for normality (Kolmogorov-Smirnov and Shapiro-Wilk) support conclusions on normality for three item constructs. Statistics for both tests are significant for proactive norms ($p < .100$) and insignificant for reactive norms ($p > .200$). Statistics for both tests are insignificant ($p > .200$) for the six and five item constructs.

Figure 16.

Graphical presentation of variations in the level of formalized transactional and relational contract frameworks used by Danish municipalities for organizing relations with private providers of park and road maintenance.



Graphical presentation of *variations* in the level of institutionalization of proactive and reactive collaborative norms in Danish municipalities' contractual relations with private providers of road and park maintenance services. Cases organized by the level of institutionalization of proactive collaborative norms (from low to high). N=61.

The graphical presentation shows that in most cases (39 out of 61) the level of institutionalization of proactive collaborative norms is substantially higher than the level of institutionalization of reactive collaborative norms. The graphical presentation also shows that for some cases (22 out of 61 municipalities) the scores for the level of institutionalization of reactive collaborative norms are higher than or equals the scores for the level of institutionalization of proactive collaborative norms.

The level of institutionalization of reactive collaborative norms varies to a substantial extent for groups of cases with approximately the same levels of institutionalization of proactive collaborative norms (e.g. by visually inspecting variations for scores between approximately 7 and 8). However, the general tendency of a close association (correlation = .527, $p < .001$) between the levels of institutionalization of the two types of collaborative norms is also evident in the graphical presentation. The tendency (marked by the linear trend line for reactive collaborative norms in Figure 16) shows that on the average, a higher level of institutionalization of proactive collaborative norms also involves a higher level of institutionalization of reactive collaborative norms.

6.3.3 Formal contract frameworks in Norway, Sweden and the UK

6.3.3.1 Norway

Table 32 shows the importance of eight formal contract dimensions in Norwegian municipalities' relations with private providers of park and road maintenance. Two dimensions are generally found to be very important. These dimensions include '*juridical clauses / agreement (§§)*' (mean score = 8.3) and '*service specification based on quantities, instruction and performance measures*' (mean score = 7.0). Three other dimensions are found to be of medium importance. These dimensions include '*competence requirements*' (mean score = 6.4), '*service specifications based on functionality and purpose*' (mean score = 6.3) and '*formal sanctions in case of non-compliance*' (mean score = 6.1). Dimensions related to alternative contractual approaches, including '*formal collaboration and joint planning*' (mean score = 4.8), '*contractor's involvement / contact with users*' (mean score = 2.8) and '*economic incentives for investment, improvements and optimization*' (mean score = 2.6) are on the average found to be of less importance.

Table 32.

Norway: Formal contract dimensions for managing and organizing provision of park and road maintenance services by private contractors

Importance of formal dimension ^a	Descriptive statistics		
	N	Mean	S.D.
<i>Juridical clauses / agreement (§§)</i>	73	8.3	2.4
<i>Service specification based on quantities, instruction and performance measures</i>	72	7.0	2.9
<i>Competence requirements</i>	73	6.4	2.9
<i>Service specification based on functionality and purpose</i>	70	6.3	3.2
<i>Formal sanctions in case of non-compliance</i>	72	6.1	3.0
<i>Formal collaboration and joint planning</i>	70	4.8	3.2
<i>Contractor's involvement / contact with users</i>	70	2.8	2.9
<i>Economic incentives for investment, improvements and optimization</i>	69	2.6	2.9

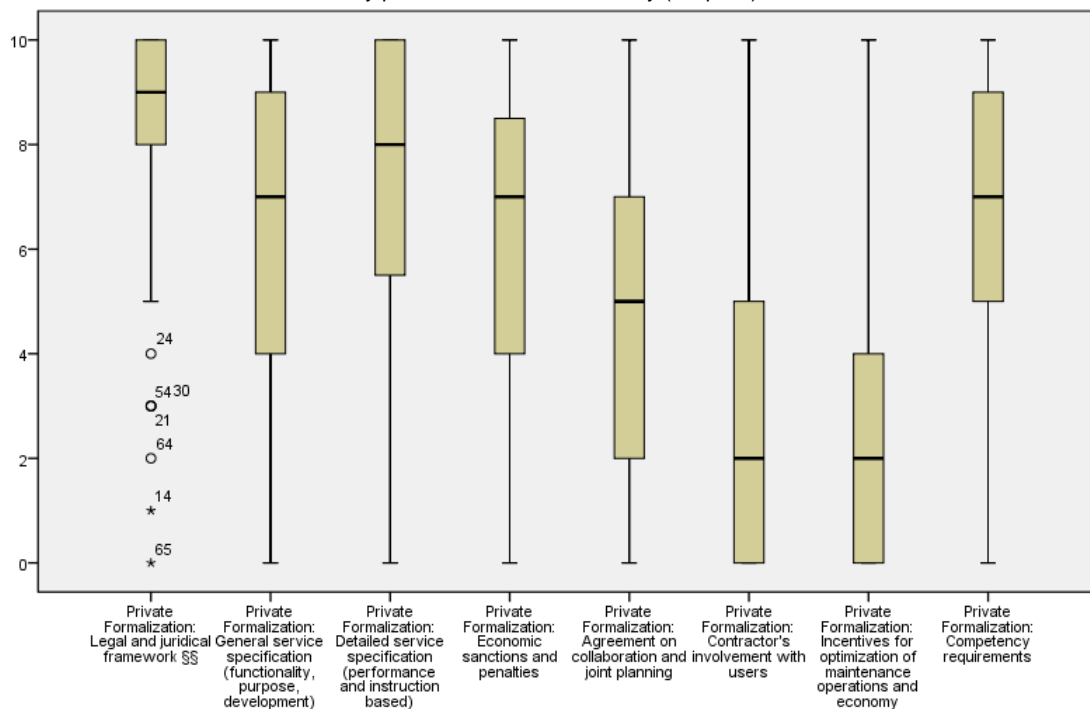
^a All items measured on a scale from 0 to 10 (0 = 'not at all', 10 = 'very high degree') on the question. "On a scale from 0 to 10, please indicate in which degree the following content is a central part of your department's arrangements with private contractors".

The figures for standard deviations in Table 32 show that the inter-municipal differences in general are high (ranging from 2.4 to 3.2). The highest levels of inter-municipal differences are found for '*formal collaboration and joint planning*' (S.D. = 3.2) which indicates that the scores for 66 % of the municipalities lies between 1.6 and 8.4 and for '*service specifications based on functionality*

and purpose’ (S.D. = 3.2) which indicates that the scores for 66 % of the municipalities lies between 2.8 and 9.5 as well as for ‘formal sanctions in case of non-compliance’ (S.D. =3.0) which indicates that the score for 66 % of the municipalities lies between 3.1 and 9.1. The inter-municipal differences are smallest (but still relatively high) for ‘juridical clauses / agreement (§§)’ (S.D. = 2.4).

The information given by the boxplots in Figure 17 provide further information on the high levels of inter-municipal differences reported in Table 32. Similar to the figures on standard deviations, the boxplot shows a relatively high variation among all the Norwegian municipalities with the exception of ‘juridical clauses / agreement (§§)’ which has a lower variance than the other seven contract dimensions. However, it is worth noting that this variable has seven outliers which strongly deviate from the median value and contributes to some of the variance in the importance of the contract dimension.

Figure 17.
Formal contract dimensions for managing and organizing provision of park and road maintenance by private contractors in Norway (boxplots)



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled boxes represent 50 % of the cases, the top of the box represent the 75 % quartile and the bottom the 25 % quartile. The middle of the box represents the median value (or the 50 % quartile). 95 % of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The boxplots also show that although the average scores for some contract dimensions are relatively low still some municipalities score these dimensions higher. For example, the boxplot shows that 25% of the municipalities give scores between 6 and 10 for *'contractor's involvement / contact with users'* and 25% of the municipalities give scores between 5 and 10 for *'economic incentives for investment, improvement and optimization'*. In other words, the boxplot illustrates that significant groups of municipalities evaluate these dimensions as having relatively high importance in their contractual frameworks. Likewise, the boxplots also show that significant groups of municipalities find some contract dimensions, e.g. *'service specification based on quantities, instruction and performance measures'*, of less importance (i.e. scores for the first quartile range between 0 and 4).

Overall, the analysis shows a large degree of inter-municipal differences in the importance of the eight contract dimensions. In particular, the analysis shows that all contract dimensions are important for either smaller or larger groups of municipalities. However, some contract dimensions are more widespread across the sector and the importance of these dimensions varies less among the municipalities.

6.3.3.2 *Two types of formal frameworks*

Further statistical analysis (factor analysis) shows that the eight contract dimensions can be grouped into two more general 'factors', i.e. some dimensions can be said to be 'bundled' together when they are used by the municipalities.

Factor analysis

An explorative factor analysis was carried out with the aim of identifying any potential 'factors' which could be used for constructing composite scores for the eight items measuring the level of formalized contract framework.

The 'factorability' of the eight items, i.e. suitability of factor analysis, was initially assessed by standard criteria. Diagnosis statistics indicate that factor analysis is appropriate. The ratio between the total number of available cases for factor analysis ($N = 64$, listwise) and the number of items (8) is reasonable for explorative factor analysis (a ratio > 5) but not ideal (a ratio > 20). All items are correlated to several other items in some degree ($>.4$), indicating that all items share some common variance with other items, and anti-image correlations (diagonals) are all well above the recommended minimum of .500 ($\geq .686$). Kaiser-Meyer-Olkin of sampling adequacy is .778 (well above the recommend minimum value of .500) and Barlett's test of sphericity is also significant (x^2

(28) = 267.657 $p < .001$). The factor analysis was run as a principal component analysis (PCA) with direct oblimin rotation. The PCA method is suitable for explorative factor analysis where the purpose is to identify composite constructs for further analysis. The chosen rotation method allows correlations to co-exist between extracted factors. Main results from the factor analysis are shown in Table 33.

Table 33.

Factor loadings and communalities based on a principal component analysis with oblimin rotation for 8 survey items on formalized contract features

Items	Primary factor loadings and communalities ^a		
	Formalized transactional contract framework (TCF)	Formalized relational contract framework (RCT)	Communalities
Juridical clauses / agreement (§§)	.930		.760
Service specification based on functionality and purpose	.662	(.352)	.734
Service specification based on quantities, instruction and performance measures	.884		.775
Formal sanctions in case of non-compliance	.872		.757
Formal collaboration and joint planning		.688	.685
Contractor's involvement / contact with users		.741	.678
Economic incentives for investment, improvements and optimization		.895	.708
Competence requirements ^b	.447	(.353)	.440

^a N = 64 (list wise) Two factors extracted (Eigenvalues > 1). Factor loadings below .3 are suppressed. Solution extracted in 6 iterations. Secondary factor loadings in brackets.

^b Factor loadings are relatively low and approximately similar for both factors. The item also has a relatively low degree of communality (= .440). The item is therefore not included in index constructs.

Two factors with Eigenvalues above 1 were extracted. The two extracted factors explain a total of 69 % of the total inter-item variance. The first factor, labeled '*formalized transactional contract framework*', explains approximately 53 % of the variance while the second factor, '*formalized relational contract framework*', explains approximately 16 % of the variance. The correlation between the two factors is .367.

One item (competency requirements) was evaluated as inappropriate for inclusion in subsequent index constructs based on the division into two separate dimensions for the contract framework in Norway. The factor analysis shows that the single item 'competency requirements' loads relatively low and approximately with the same value on both factors. The communality was furthermore relatively low. The item did not contribute to a separate measurement of one factor relatively to the other factor. The subsequent construction of index was therefore based on the remaining 7 single items.

The internal consistency (reliability) of the underlying items in the two factors was checked by analysis of values for Cronbach's Alpha. The Alpha value was good for items included in the first factor (.882) while moderate for items included in the second factor (.766). Values for Alpha could furthermore not be improved by removing any items included in the two extracted factors.

Composite scores were created for both factors, based on simple summative scores for the corresponding items which had their primary loading on the respective factor. Descriptive statistics for the composite (index) constructs are shown in Table 34.

Table 34.
Descriptive statistics for index constructs: formalized transactional and relational contract framework (TCF and RCF)

Constructs ^a	Descriptives					Alpha
	No. of items	Mean (S.D) ^b	Min-Max value	Skewness	Kurtosis	
Formalized transactional contract framework (TCF)	4	6,9 (2.52)	00.00-10.00	-.949	.169	.882
Formalized relational contract framework (RCT)	3	3,4 (2.50)	00.00-9.00	.293	-.946	.766

^a N = 70 (TCF), 64 (RCT)

^b Scale: 0-10 (where 0='not at all' and 10='in very high degree' in the scales used in the original items).

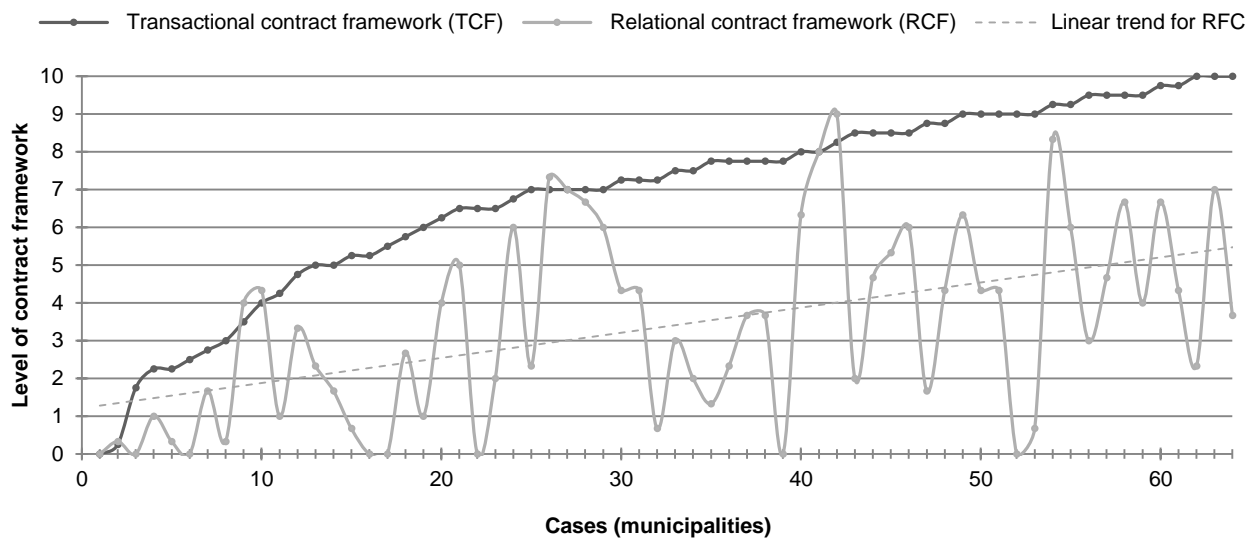
The correlation (Pearson's) between the two composite constructs (TCF and RCF) is .532 ($p < .001$, two tailed). Values for skewness and kurtosis indicate whether the two constructs can be regarded as approximately normal distributed. The construct for the level of formalized transactional contract framework is strongly left skewed (-.949), e.g. has a long 'thick' left tail and cannot be regarded as normal distributed around the mean value. The construct for the level of formalized relational contract framework is slightly right skewed (.293) and has a noteworthy kurtosis value (-.946) and therefore it cannot be regarded as normal distributed.

6.3.3.3 *Inter-municipal variations in formal contract framework in Norway*

The levels of formalized transactional and relational contract frameworks used for organizing relations with private providers of park and road maintenance vary across Norwegian municipalities (see also Table 32). Figure 18 shows a graphical presentation of the inter-municipal variations. The presentation orders the cases (municipalities) from left to right by the level of formalized *transactional* contract framework.

Figure 18.

Graphical presentation of variations in the level of formalized transactional and relational contract frameworks used by Norwegian municipalities for organizing relations with private providers of park and road maintenance



Graphical presentation of *variations* in the level of formal contract framework (transactional and relational) in Swedish municipalities' relations with private contractors delivering road and park maintenance services. Cases organized by their overall level of contract framework (from low to high). N=64.

The graphical presentation in Figure 18 shows that only for few cases (4 out of 64 municipalities) the scores for the level of formalized *relational* contract framework are equal or higher than the scores for the level of formalized *transactional* contract framework. The graphical presentation in Figure 18 also shows that in most cases the formalized *transactional* contract framework is substantially more important than the formalized *relational* contract framework and the level of formalized *relational* contract framework varies to a good extent for groups of cases with approximately the same level of formalized *transactional* contract framework. However, the correlation (Pearson's $r = .532$ $p < .001$) between the two types of frameworks for all cases is also evident in the graphical presentation. The tendency (marked by the linear trend line for RCF in Figure 18) shows that on the average, a higher level of formalized *transactional* contract framework also involves a higher level of formalized *relational* contract framework.

6.3.3.4 Sweden

Table 35 shows the importance of eight formal contract dimensions in Swedish municipalities' relations with private providers of park and road maintenance. Two dimensions are generally found to be very important. These dimensions include '*juridical clauses / agreement (§§)*' (mean score = 7.8) and '*competence requirements*' (mean score = 7.1). Three other dimensions are found to be of

medium importance. These dimensions include ‘*service specification based on quantities, instruction and performance measures*’ (mean score = 6.7), ‘*service specifications based on functionality and purpose*’ (mean score = 6.1) and ‘*formal sanctions in case of non-compliance*’ (mean score = 5.7). Dimensions related to alternative contractual approaches, including ‘*formal collaboration and joint planning*’ (mean score = 4.3), ‘*contractor’s involvement / contact with users*’ (mean score = 3.0) and ‘*economic incentives for investment, improvements and optimization*’ (mean score = 2.1) are on the average found of less importance.

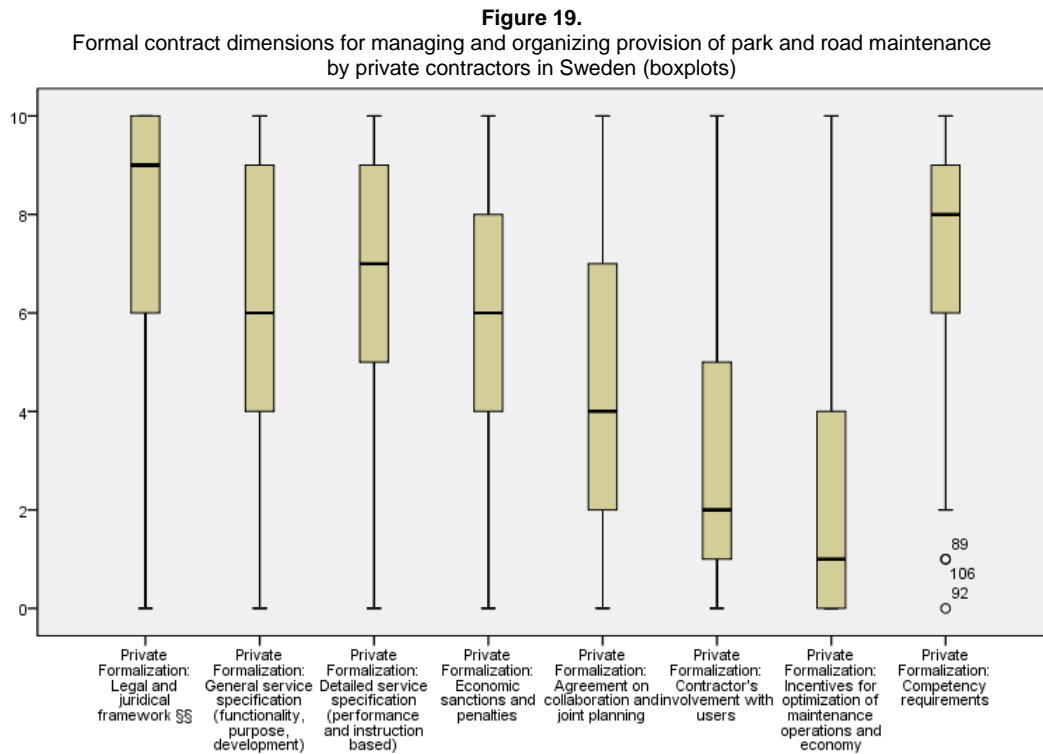
Table 35.

Sweden: Formal contract dimensions for managing and organizing provision of park and road maintenance services by private contractors

Importance of formal dimension ^a	Descriptive statistics		
	N	Mean	S.D.
<i>Juridical clauses / agreement (§§)</i>	81	7.8	2.8
<i>Competence requirements</i>	80	7.1	2.6
<i>Service specification based on quantities, instruction and performance measures</i>	79	6.7	2.9
<i>Service specification based on functionality and purpose</i>	77	6.1	3.1
<i>Formal sanctions in case of non-compliance</i>	77	5.7	3.1
<i>Formal collaboration and joint planning</i>	80	4.3	3.2
<i>Contractor’s involvement / contact with users</i>	78	3.0	2.9
<i>Economic incentives for investment, improvements and optimization</i>	74	2.1	2.8

^a All items measured on a scale from 0 to 10 (0 = ‘not at all’, 10 = ‘very high degree’) on the question. “On a scale from 0 to 10, please indicate in which degree the following content is a central part of your department’s arrangements with private contractors”.

The figures for standard deviations in Table 35 show that the inter-municipal differences in general are high (ranging from 2.6 to 3.2). The highest levels of inter-municipal differences are found for ‘*formal collaboration and joint planning*’ (S.D. = 3.2) which indicates that the scores for 66 % of the municipalities lies between 1.1 and 7.5 and for ‘*service specifications based on functionality and purpose*’ (S.D. = 3.1) which indicates that the scores for 66 % of the municipalities lies between 3.0 and 9.2 as well as for ‘*formal sanctions in case of non-compliance*’ (S.D. = 3.1) which indicates that the score for 66 % of the municipalities lies between 2.6 and 8.8. The inter-municipal differences are smallest, but still high, for ‘*competence requirements*’ (S.D. = 2.6).



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled boxes represent 50 % of the cases, the top of the box represent the 75 % quartile and the bottom the 25 % quartile. The middle of the box represents the median value (or the 50 % quartile). 95 % of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The information given by the boxplots in Figure 19 provide further information on the high levels of inter-municipal differences reported in Table 35. Similar to the figures on standard deviations, the boxplot shows a relatively high variation among the Swedish municipalities. The boxplot illustrates that *'competency requirements'* has a slightly lower variance than the other seven contract dimensions, however it is worth noting that this variable has three outliers which strongly deviate from the median value and contributes to some of the variance in the importance of the contract dimension.

The boxplots also show that although the average scores for some contract dimensions are relatively low still some municipalities score these dimensions relatively high. For example, the boxplot shows that 25% of the municipalities give scores between 6 and 10 for *'contractor's involvement / contact with users'* and 25% of the municipalities give scores between 5 and 10 for *'economic incentives for investment, improvement and optimization'*. In other words, the boxplot illustrates that significant groups of municipalities evaluate these dimensions as having relatively high importance in their contractual frameworks. Likewise, the boxplots also show that significant

groups of municipalities find some contract dimensions, e.g. *‘juridical clauses / agreement (§§)’*, of less importance (i.e. scores for the first quartile range between 0 and 5).

Overall, the analysis shows a large degree of inter-municipal differences in the importance of the eight contract dimensions. In particular, the analysis shows that all contract dimensions are important for either smaller or larger groups of municipalities. However, some contract dimensions are more widespread across the sector and the importance of these dimensions varies less among the municipalities.

6.3.3.5 Two types of formal frameworks in Sweden

Further statistical analysis (factor analysis) shows that the eight contract dimensions can be grouped into two more general ‘factors’, i.e. some dimensions can be said to be ‘bundled’ together when they are used by the municipalities.

Factor analysis

An explorative factor analysis was carried out with the aim of identifying any potential ‘factors’ which could be used for constructing composite scores for the eight items measuring the level of formalized contract framework.

The ‘factorability’ of the eight items, i.e. suitability of factor analysis, was initially assessed by standard criteria. Diagnosis statistics indicate that factor analysis is appropriate. The ratio between the total number of available cases for factor analysis ($N = 68$, listwise) and the number of items (8) is reasonable for explorative factor analysis (a ratio > 5) but not ideal (a ratio > 20). All items are correlated to several other items in some degree ($>.4$), indicating that all items share some common variance with other items, and anti-image correlations (diagonals) are all well above the recommended minimum of $.500$ ($\geq .771$). Kaiser-Meyer-Olkin of sampling adequacy is $.834$ (well above the recommend minimum value of $.500$) and Barlett’s test of sphericity is also significant ($\chi^2(28) = 229,189$ $p < .001$). The factor analysis was run as a principal component analysis (PCA) with direct oblimin rotation. The PCA method is suitable for explorative factor analysis where the purpose is to identify composite constructs for further analysis. The chosen rotation method allows correlations to co-exist between extracted factors. Main results from the factor analysis are shown in Table 36.

Table 36.

Factor loadings and communalities based on a principal component analysis with oblimin rotation for 8 survey items on formalized contract features in Sweden

Items	Primary factor loadings and communalities ^a		
	Formalized transactional contract framework (TCF)	Formalized relational contract framework (RCT)	Communalities
Juridical clauses / agreement (§§)	.890		.707
Service specification based on functionality and purpose	.630	(.329)	.670
Service specification based on quantities, instruction and performance measures	.826		.614
Formal sanctions in case of non-compliance	.755		.766
Formal collaboration and joint planning		.744	.713
Contractor's involvement / contact with users		.754	.605
Economic incentives for investment, improvements and optimization		.847	.651
Competence requirements	.611		.561

^a N = 68 (list wise) Two factors extracted (Eigenvalues > 1). Factor loadings below .3 are suppressed. Solution extracted in 6 iterations. Secondary factor loadings in brackets.

Two factors with Eigenvalues above 1 were extracted. The two extracted factors explain a total of 66 % of the total inter-item variance. The first factor, labeled '*formalized transactional contract framework*', explains approximately 51 % of the variance while the second factor, '*formalized relational contract framework*', explains approximately 15 % of the variance. The correlation between the two factors is .399. The internal consistency (reliability) of the underlying items in the two factors was checked by analysis of values for Cronbach's Alpha. The Alpha value was good for items included in the first factor (.856) while moderate for items included in the second factor (.745). Values for Alpha could furthermore not be improved by removing any items included in the two extracted factors.

Composite scores were created for both factors, based on simple summative scores for the corresponding items which had their primary loading on the respective factor. Descriptive statistics for the composite (index) constructs are shown in Table 37.

Table 37.

Descriptive statistics for index constructs: formalized transactional and relational contract framework (TCF and RCF)

Constructs ^a	Descriptives					
	No. of items	Mean (S.D) ^b	Min-Max value	Skewness	Kurtosis	Alpha
Formalized transactional contract framework (TCF)	5	6.6 (2.32)	0.60-10.00	-.585	-.209	.856
Formalized relational contract framework (RCT)	3	3.1 (2.38)	0.00-9.33	.647	-.471	.745

^a N = 75 (TCF), 72 (RCT)

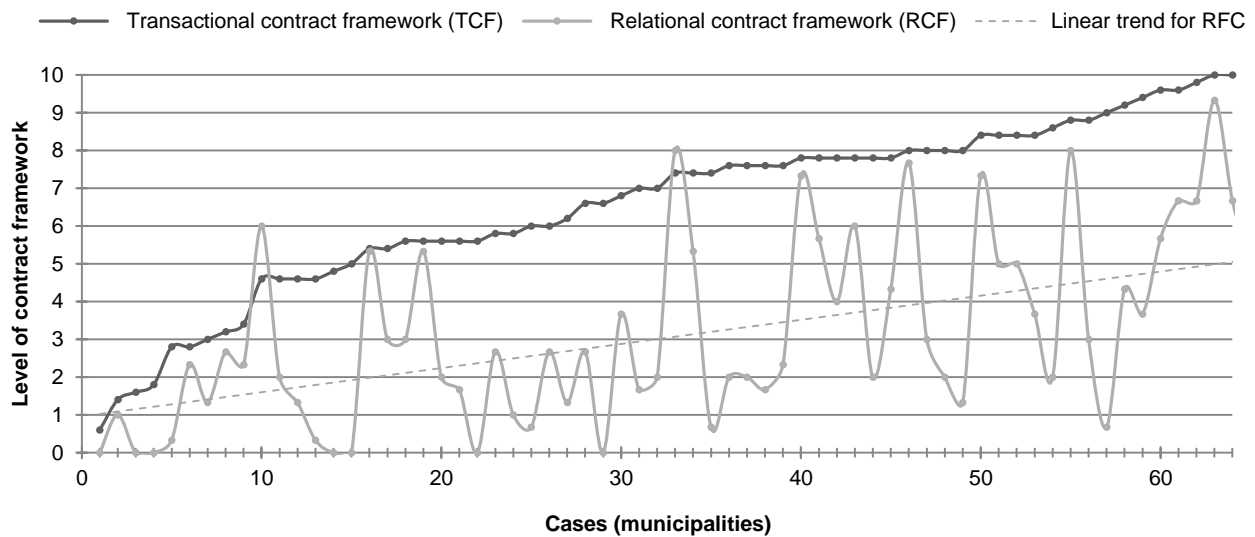
^b Scale: 0-10 (where 0='not at all' and 10='in very high degree' in the scales used in the original items).

The correlation (Pearson's) between the two composite constructs (TCF and RCF) is .550 ($p < .001$, two tailed). Values for skewness and kurtosis indicate whether the two constructs can be regarded as approximately normal distributed. The construct for the level of formalized transactional contract framework is strongly left skewed (-.585), e.g. has a long 'thick' left tail and cannot be regarded as normally distributed around the mean value. The construct for the level of formalized relational contract framework is strongly right skewed (.647) and cannot be regarded as normally distributed.

6.3.3.6 Inter-municipal variations in formal contract framework in Sweden

The levels of formalized transactional and relational contract frameworks used for organizing relations with private providers of park and road maintenance vary across Swedish municipalities (see also Table 35). Figure 20 shows a graphical presentation of the inter-municipal variations. The presentation orders the cases (municipalities) from left to right by the level of formalized *transactional* contract framework.

Figure 20. Graphical presentation of variations in the level of formalized transactional and relational contract frameworks used by Swedish municipalities for organizing relations with private providers of park and road maintenance



Graphical presentation of *variations* in the level of formal contract framework (transactional and relational) in Swedish municipalities' relations with private contractors delivering road and park maintenance services. Cases organized by their overall level of contract framework (from low to high). N=68.

The graphical presentation in Figure 20 shows that only for few cases (2 out of 68 municipalities) the scores for the level of formalized *relational* contract framework are higher than the scores for the level of formalized *transactional* contract framework. The graphical presentation in Figure 14

also shows that in most cases the formalized *transactional* contract framework is substantially more important than the formalized *relational* contract framework and the level of formalized *relational* contract framework varies to a good extent for groups of cases with approximately the same level of formalized *transactional* contract framework. However, the correlation (Pearson's $r = .550$ $p < .001$) between the two types of frameworks for all cases is also evident in the graphical presentation. The tendency (marked by the linear trend line for RCF in Figure 20) shows that on the average, a higher level of formalized *transactional* contract framework also involves a higher level of formalized *relational* contract framework.

6.3.3.7 The UK

Table 38 shows the importance of nine formal contract dimensions in Local Authorities' relations with private providers of park and road maintenance in the UK. The single most important dimension is '*juridical clauses / agreement (§§)*' (mean score = 8.8). Four dimensions can be regarded of almost similar importance including: '*service specification based on functionality and purpose*' (mean score = 7.7), '*service specifications based on quantities, instruction and performance measures*' (mean score = 7.5), '*formal collaboration and joint planning*' (mean score = 7.2) and '*competence requirements*' (mean score = 7.0). Dimensions related to alternative contractual approaches, including '*requirements for delivering local benefits*' (mean score = 4.5) and '*economic incentives for investment, improvements and optimization*' (mean score = 2.8) are on the average found of less importance.

Table 38.

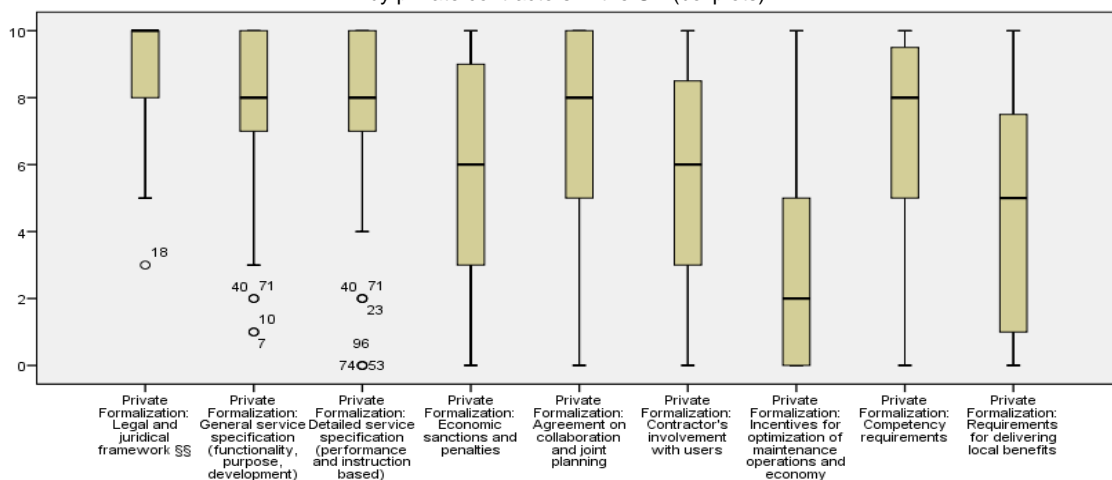
UK: Formal contract dimensions for managing and organizing provision of park and road maintenance services by private contractors

Importance of formal dimension ^a	Descriptive statistics		
	N	Mean	S.D.
<i>Juridical clauses / agreement (§§)</i>	57	8.8	1.8
<i>Service specification based on functionality and purpose</i>	57	7.7	2.6
<i>Service specification based on quantities, instruction and performance measures</i>	57	7.5	2.8
<i>Formal collaboration and joint planning</i>	55	7.2	2.8
<i>Competence requirements</i>	55	7.0	2.8
<i>Formal sanctions in case of non-compliance</i>	55	5.8	3.3
<i>Contractor's involvement / contact with users</i>	56	5.6	3.3
<i>Requirements for delivering local benefits.</i>	56	4.5	3.6
<i>Economic incentives for investment, improvements and optimization</i>	54	2.8	3.2

^a All items measured on a scale from 0 to 10 (0 = 'not at all', 10 = 'very high degree') on the question. "On a scale from 0 to 10, please indicate in which degree the following content is a central part of your department's arrangements with private contractors".

With the exception of *‘juridical clauses / agreement (§§)’*, the figures for standard deviations in Table 38 show that the inter-municipal differences in general are high (ranging from 2.6 to 3.6). The highest levels of differences among Local Authorities are found for *‘requirements for delivering local benefits’* (S.D. = 3.6) which indicates that the scores for 66 % of the Local Authorities lies between 0.9 and 8.1. The variation among Local Authorities’ assessment of the importance of *‘formal sanctions in case of non-compliance’* and *‘contractor’s involvement / contact with users’* is found to be relatively high as well (S.D. = 3.3 for both dimensions) which indicates that the scores for 66% of the Local Authorities lies between 2.5 and 9.1 in the case of *‘formal sanctions in case of non-compliance’* and between 2.3 and 8.9 in the case of *‘contractor’s involvement / contact with users’*. The differences among Local Authorities are smallest for *‘juridical clauses / agreement (§§)’* (S.D. = 1.8).

Figure 21. Formal contract dimensions for managing and organizing provision of park and road maintenance by private contractors in the UK (boxplots)



Note: Boxplot (SPSS output) illustrating the distribution of quartiles and outliers. The filled boxes represent 50 % of the cases, the top of the box represent the 75 % quartile and the bottom the 25 % quartile. The middle of the box represents the median value (or the 50 % quartile). 95 % of all cases are expected to lie between the two whiskers extending from the box. Data source: INOPS data 2015.

The information given by the boxplots in Figure 21 provides further insights on the high levels of differences reported among Local Authorities in Table 38. Similar to the figures on standard deviations, the boxplot shows relatively high variations among all Local Authorities in the UK with the exception of *‘juridical clauses / agreement (§§)’* which has a lower variance than the other eight contract dimensions. It is noteworthy that the three items with the lowest variation all have outliers

which strongly deviate from the median value and contributes to some of the variance in the importance of the contract dimension.

The boxplots also show that although the average scores for some contract dimensions are relatively low still some Local Authorities score these dimensions higher. For example, the boxplot shows that 25% of the Local Authorities give scores between 6 and 10 for '*economic incentives for investment, improvements and optimization*'. In other words, the boxplot illustrates that significant groups of Local Authorities evaluate this dimensions as having relatively high importance in their contractual frameworks. Likewise, the boxplots also show that significant groups of Local Authorities find some contract dimensions, e.g. '*formal collaboration and joint planning*', of less importance (i.e. scores for the first quartile range between 0 and 4). Furthermore, the boxplot shows that 25% of Local Authorities in the UK gives the score 10 for '*juridical clauses / agreement (§§)*' which indicates that this contract dimension is of very high importance among a significant amount of Local Authorities.

Overall, the analysis shows a large degree of differences among Local Authorities in the importance of the eight contract dimensions. In particular, the analysis shows that all contract dimensions are important for either smaller or larger groups of Local Authorities. Only very few Local Authorities have scored the contract dimensions '*juridical clauses / agreement (§§)*', '*service specification based on functionality and purpose*' and '*service specifications based on quantities, instruction and performance measures*' below 3 which indicates that these contract dimensions are particularly important among Local Authorities in the UK.

6.3.3.8 *Two main types of formal contract frameworks in the UK*

Further statistical analysis (factor analysis) shows that the nine contract dimensions can be grouped into several more general 'factors', i.e. some dimensions can be said to be 'bundled' together when they are used by the Local Authorities.

Factor analysis

An explorative factor analysis was carried out with the aim of identifying any potential 'factors' which could be used for constructing composite scores for the nine items measuring the level of formalized contract framework.

The ‘factorability’ of the eight items, i.e. suitability of factor analysis, was initially assessed by standard criteria. Diagnosis statistics indicate that factor analysis is appropriate. The ratio between the total number of available cases for factor analysis ($N = 47$, listwise) and the number of items (9) is just acceptable for explorative factor analysis (a ratio > 5) but far from ideal (a ratio > 20). All items are correlated to one or more other items in some degree (p -values $> .3$), indicating that most items share some common variance with other items, and anti-image correlations (diagonals) are all above the recommended minimum of $.500$ ($\geq .592$). Kaiser-Meyer-Olkin of sampling adequacy is $.672$ (above the recommend minimum value of $.500$) and Barlett’s test of sphericity is also significant ($\chi^2(36) = 118.570$ $p < .001$).

Table 39.

Factor loadings and communalities based on a principal component analysis with oblimin rotation for 9 survey items on formalized contract features in the UK

Items	Primary factor loadings and communalities ^a			Communalities
	Formalized relational and performance-oriented contract framework	Formalized transactional contract framework	Formalized incentive-centered contract framework	
Juridical clauses / agreement (§§)		.587		.509
Service specification based on functionality and purpose	.538			.450
Service specification based on quantities, instruction and performance measures		.946		.834
Formal sanctions in case of non-compliance		.836		.774
Formal collaboration and joint planning	.882			.744
Contractor’s involvement / contact with users	.789			.624
Economic incentives for investment, improvements and optimization			.794	.708
Competence requirements	(.352)	(.464)	(-.355)	.553
Requirements for delivering local benefits	(.648)		(.504)	.662

^a $N = 64$ (list wise) Two factors extracted (Eigenvalues > 1). Factor loadings below $.3$ are suppressed. Solution extracted in 7 iterations. Secondary factor loadings in brackets.

The factor analysis was run as a principal component analysis (PCA) with direct oblimin rotation. The PCA method is suitable for explorative factor analysis where the purpose is to identify composite constructs for further analysis. The chosen rotation method allows correlations to co-exist between extracted factors. Main results from the factor analysis are shown in Table 39. Three factors with Eigenvalues above 1 were extracted, a fourth factor scored an Eigenvalue of $.933$ and would have explained approximately 10% of the variance but was not extracted due to standard criteria not being met (Eigenvalue ≥ 1). The three extracted factors explain a total of 65 % of the total inter-item variance. The first factor, labeled ‘*formalized relational and performance-oriented contract framework*’, explains approximately 35 % of the variance, the second factor, ‘*formalized*

transactional contract framework', explains approximately 17 % of the variance and the third factor, *'formalized incentive-centered contract framework*', explains approximately 12% of the variance. The correlation between factor 1 and factor 2 is .296, the correlation between factor 1 and factor 3 is -.006 and the correlation between factor 2 and factor 3 is .033. The internal consistency (reliability) of the underlying items in the three factors was checked by analysis of values for Cronbach's Alpha. The Alpha value was moderate for items included in the first factor (.652) while being of a higher value for items included in the second factor (.763). Values for Alpha could furthermore not be improved by removing any items included in the two extracted factors. The third factor, *'formalized incentive-centered contract framework*', only loaded a single item unambiguously and therefore an analysis of Cronbach's Alpha was not necessary.

Composite scores were created for factor 1 and factor 2, based on simple summative scores for the corresponding items which had their primary loading on the respective factor. Descriptive statistics for the composite (index) constructs are shown in Table 40.

Table 40.

Descriptive statistics for index constructs: formalized relational and performance-oriented contract framework & formalized transactional contract framework.

Constructs ^a	Descriptives					
	No. of items	Mean (S.D) ^b	Min-Max value	Skewness	Kurtosis	Alpha
Formalized relational and performance-oriented contract framework	3	6.9 (2.23)	0.67-10.00	-.552	-.279	.652
Formalized transactional contract framework	3	7.4 (2.3)	2.67-10.00	.518	-.981	.736

^a N = 54 (formalized relational and performance-oriented contract framework), 55 (formalized transactional contract framework)

^b Scale: 0-10 (where 0='not at all' and 10='in very high degree' in the scales used in the original items).

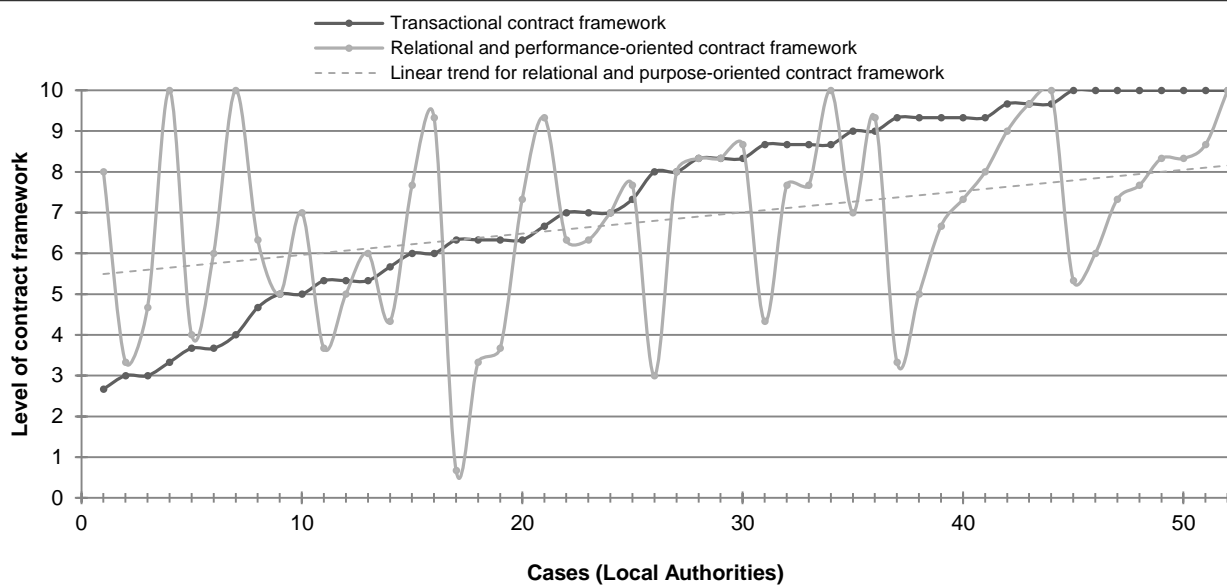
The correlation (Pearson's) between the two composite constructs is .298 ($p < .005$, two tailed). Values for skewness and kurtosis indicate whether the two constructs can be regarded as approximately normal distributed. The construct for the level of formalized relational and performance-oriented contract framework is moderately left skewed (-.552), e.g. has a long 'thick' left tail and cannot be regarded as normally distributed around the mean value. Likewise, the construct for the level of formalized transactional framework is moderately left skewed as well (.518) and has a noteworthy kurtosis value (-0.981), therefore it cannot be regarded as normally distributed.

6.3.3.9 Variations in formal contract framework among UK Local Authorities

The levels of formalized relational and performance-oriented contract frameworks as well as formalized transactional contract frameworks used for organizing relations with private providers of park and road maintenance vary across Local Authorities in the UK. Figure 22 shows a graphical presentation of the inter-municipal variations. The presentation orders the cases (Local Authorities) from left to right by the level of formalized *transactional* contract framework.

Figure 22.

Graphical presentation of variations in the level of formalized relational and performance-oriented frameworks & formalized transactional contract frameworks used by Local Authorities for organizing relations with private providers of park and road maintenance in the UK.



Graphical presentation of *variations* in the level of formal contract framework (transactional & relational and purpose-oriented) among Local Authorities' relations with private contractors delivering road and park maintenance services in the UK. Cases organized by their overall level of contract framework (from low to high). N=52.

The graphical presentation in Figure 22 shows that the linear trend for relational and performance-oriented contract framework follows the curve for transactional contract framework closely, indicating that, on the average, a higher level of formalized *transactional* contract framework also involves a higher level of *relational and performance-oriented* contract framework. However, the correlation (Pearson's $r = .299$ $p < .001$) is also evident in the graphical presentation indicating a relatively weak correlation between the two frameworks. For a significant amount of cases (26 out of 52) the level of relational and performance-oriented contract framework is equal to, or higher than the level of transactional contract framework. Likewise, for a significant amount of cases (33 out of 52) the level transactional contract framework is equal to, or higher than the level of

relational and performance-oriented contract framework. Furthermore, the level of *relational and performance-oriented* contract framework varies to a good extent for groups of cases with approximately the same level of formalized *transactional* contract framework.

6.4 Explanatory analysis of contract frameworks

This section explores factors which help explain differences among Danish municipalities in their levels of respectively formalized transactional and relational contract frameworks when they contract out park and road maintenance. In particular, the section addresses whether the following factors makes a difference for the level of respectively formal transactional contract framework (TCF) and formal relational contract framework (RCF):

- Transactional complexity measured by the absolute economic value of private sector involvement in park and road maintenance in the municipality (combined).
- Department responsibility as in-house provider.
- The use of external advice (consultants) in procurement processes in the municipality.
- The internal contract management capacity.
- The importance of development as contracting purpose (‘development/learning contracting strategy’) for the municipality
- The importance low cost as contracting purpose (‘low cost contracting strategy’) for the municipality

Higher transactional complexity of private sector involvement is expected to be positively correlated with higher levels of both TCF and RCF. The degree of transactional complexity in a municipality’s relations with its private contractors is operationalized by a register-based measure for the absolute economic value of the involvement of private contractors (expenditure on private contractors). Larger economic involvements in the park and road sector commonly include a greater number of works to be carried out, more work sites distributed across a given geography, needs for more unilateral as well as bilateral planning and coordination, greater risks, higher levels of required capital investments (staff, site location, machinery, production facilities and so on), a greater number of sub-contractors and support functions, a greater number of potential stakeholders, more contingencies which need to be addressed and so on – all aspects which adds up to a greater transactional complexity which need to be managed and coordinated in the contractual relation.

Stronger contract management capacity in the municipality as well as greater involvement of external advice / consultants are both expected to be positively correlated with the levels of both

TCF and RCF. The department responsibility as in-house provider is expected to be negatively correlated with the levels of TCF and RCF. Higher emphasis on a contracting strategy based on a low cost rationale is expected to be positively correlated with the level of TCF but negatively correlated or un-correlated with the level of RCF. Higher emphasis on a contracting strategy based on a learning (development) rationale is expected to be positively correlated with the level of RCF as well as the association is expected to be stronger than the association with the level of TCF.

Table 41 shows construction and simple descriptive statistics for variables used in the explanatory analysis. The data shows a huge variation in the size of expenditure among Danish municipalities on maintenance services provided by private contractors. The average expenditure is DKK 45.2 million (equal to €6 million), but the variation ranges from a minimum of DKK 4.6 million (equal to €600,000) to a maximum of DKK 271.5 million (equal to €36.4 million). Overall, the underlying data for expenditure is characterized by a strong right skewness, i.e. a few municipalities have very high values for expenditure compared to the majority. Due to the strong skewness the final variable for economic value is based on a logarithmic (natural) transformation of the original data.

Table 41.
Variables used in explanatory analysis of the level of contractual frameworks (Denmark)

Variable	Construction	Descriptives				
		Scale	N ^c	Min-Max	Mean	S.D.
TCF (formalized transactional contract framework)	Composite, 4 survey items (Alpha = .870)	0-10 ^a	57	2.0–10.0	7.5	2.1
RCF (formalized relational contract framework)	Composite, 4 survey items (Alpha = .764)	0-10 ^a	57	.5–10.0	4.9	2.0
Value of economic involvement	Economic value (DKK) of budgets spend on private contractors (parks and roads, combined)	LN ^b	58	8.4–12.5	10.4	.7
Dept. responsibilities as provider	Dummy variable	0=no, 1=yes	58	0–1	.67	.5
Internal contracting capability	Composite, 4 survey items (Alpha = .810)	0-10 ^a	58	3.3–10.0	6.9	1.6
External advice (use of consultants)	Single survey item	0-10 ^a	58	0–10	6.2	2.5
Contracting purpose: Low maintenance costs	Single survey item	0-10 ^a	58	0–10	7.5	2.0
Contracting purpose: Development of services and organization	Composite, 2 survey items (Alpha = .843)	0-10 ^a	58	0.0–8.5	5.0	2.1

^a Item(s) measured on an 11-point response scale with anchors (0 = 'not at all' and 10 = 'very high degree').

^b Data source: Statistics Denmark. Distribution of underlying data is strongly left skewed. Data is transformed into a natural logarithmic (LN) scale.

^c Valid N (listwise) = 56

About two-third of the municipalities have park and road departments with direct responsibility as internal provider of maintenance services. The other one-third has either no direct

responsibility for internal provision or the municipality use private contractors for provision of all park and road maintenance services. The underlying survey data also shows that 8 out of the 58 municipalities (equal to 14 percent) contract out all park and road maintenance services ('total contracting'). The remaining 50 municipalities have a combination of in-house and external service provision, i.e. a degree of concurrent contracting.⁵⁷ Only 11 out of the 50 municipalities, which use a degree of concurrent contracting, have park and road departments with no direct responsibilities as municipal provider of park and road services. Overall, the data indicate that the majority of Danish municipal park and road departments have integrated direct operational responsibilities and have direct access to internal operational expertise.

The mean values for the level of internal contracting capabilities and use of external advice / consultants are almost similar (respectively 6.9 and 6.2). However, the variation measured by standard deviations for the use of external advice / consultants (S.D. = 2.5) are substantial higher than for the variations in the level of internal contracting capabilities (S.D. = 1.6). The values for the (high) variation in the involvement of external advice / consultants indicates that some municipalities only use external advice / consultants in a very limited extent while other municipalities relies more heavily on external advice / consultants.

The mean values for the contracting purposes related to respectively low maintenance costs and development/learning differs substantially and on the average low maintenance cost has a substantial greater emphasis as contracting purpose compared to development/learning as contracting purpose. While, this is unsurprising given the general framing of contracting out in public policies as a strategy to reduce costs of public service provision, there are, however, substantial variations among municipalities in the emphasis of both purposes as well as the mean value for development/learning as contracting purpose indicates that development/learning is not unimportant.

6.4.1 Main explanatory analysis

Table 42 shows the results from two hierarchical OLS regression analyses run with the two index variables for respectively formalized transactional and relational contract framework (TCF and

⁵⁷ Concurrent sourcing is conceptually defined as sourcing of the same service to both internal and external production (Parmaggio, 1997), but has in some studies been operationalized as a percentage of budgets spend on private vendors within various service areas. It should be noted, that a service area contains various tasks that might be requiring different (i.e. dissimilar) skills and routines.

RCF) as response variables. Model A-C explores the importance of the predictors for the level of TCF while model D-F explores the importance of the predictors for the level of RCF. The results indicate that five out of six predictors are important in some degree for predicting the level of formalized contract framework. The importance furthermore differs between prediction of respectively the levels of transactional and adaptive contract features.

Table 42.
Hierarchical OLS regressions: Level of formal transactional and relational contract frameworks (Denmark)

	TCF ^a			RCF ^b		
	Model A (TFC)	Model B (TFC)	Model C (TFC)	Model D (RFC)	Model E (RFC)	Model F (RFC)
<i>Predictor variables</i>	<i>Unstandardized beta-coefficients (β) and standard errors</i>					
Expenditure on private contractors (LN)	1.020 (.347) **	1.067 (.331) **	1.137 (.342) **	.857 (.347) *	.939 (.356) *	.715 (.334) *
Department responsibilities as provider (0=no, 1=yes)	÷ .946 (.530) †	÷ .771 (.479) ns	÷ .599 (.510) ns	÷ 1.019 (.528) †	÷ .918 (.509) †	÷ 1.300 (.493) *
Internal contracting capabilities (0-10)	–	.278 (.144) †	.297 (.146) *	–	.146 (.158) ns	.104 (.148) ns
Advice from external consultants (0-10)	–	.311 (.094) **	.311 (.095) **	–	.234 (.100) *	.225 (.092) *
Contracting purpose: Low cost (0-10)	–	–	.134 (.124) ns	–	–	÷ .184 (.119) ns
Contracting purpose: Development/learning (0-10)	–	–	÷ .008 (.108) ns	–	–	.329 (.105) **
N	57	57	57	57	57	57
VIF MAX	1.002	1.125	1.185	1.003	1.150	1.202
R ² / Adjusted R ²	.185 / .155	.364 / .315	.379 / .304	.162 / .131	.258 / .201	.400 / .328

Notes: Significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant. No influential outliers detected in any model (cases with standardized residuals > 3.00).

Transactional complexity, measured by the absolute level of expenditure on private contractors, is found to be important for both types of contract features in all models (A-F). The analysis indicates that higher degrees of transactional complexity are associated with higher levels of both transactional and adaptive contract features. Comparing the sizes of the beta-coefficients indicates that importance of transactional complexity is slightly more pronounced for the level of transactional contract features ($\beta = 1.137$ in model C) than the level of adaptive contract features ($\beta = .715$) in model C). The predictor is measured by a logarithmic (natural scale) which implies that the effect from transactional complexity is more pronounced for absolute differences between relatively smaller economic involvements (e.g. DKK 1 and 10 mill.) compared to differences between relatively larger economic involvements (e.g. DKK 10 and 100 mill.). In other words, the effect on the level of contracting framework from transactional complexity is diminishing with higher values for economic values.

Whether the department had a role as internal service provider (operational responsibilities) is found to be important only for the level of adaptive contract features. The analysis indicates that municipalities where the park and road department has no role as internal provider of services have a higher level of adaptive contract features in their relations with private contractors. Likewise, departments which are delegated a role in their municipality, as internal service provider, have significantly lower levels of adaptive contract features implemented in their relations with private contractors. The average difference of 1.300 (measured on a scale from 0 to 10), found in model F can be interpreted as a relative large difference given the mean score of 4.9 for all municipalities.

Both internal and external expertise for drawing up contracts is found to be important for the level of formal contract framework. Greater internal contracting capabilities are found to be important for higher levels of transactional contract features but unimportant for differences in the level of adaptive contract features. Involvement of external expertise is found to be important for higher levels of both transactional and adaptive contract features. The finding indicates that Danish municipalities have a degree of internal expertise for setting up transactional contract features, but they mainly rely on involvement of external expertise for setting up adaptive contract features.

Differences in the municipalities' emphasis on low maintenance cost as purpose for contracting out are found to be unimportant for differences in the level of both transactional and adaptive features. Higher emphasis on development/learning as contracting purpose is, however, found to be important for the level of adaptive contract features. The finding indicates that the level of transactional contract features is independent from differences in the emphasis on the two contracting purposes while the level of adaptive contract features varies with the emphasis on the level of development/learning as contracting purpose. The finding indicates that the level of emphasis on contracting purpose in some degree is reflected in formal contract design.

6.4.1.1 Additional explanatory analysis

In addition to the analysis shown in Table 42 a predictor for the importance of the contracting level (percentage of park and road maintenance budget allocated to private contractors) is found insignificant in alternative analyses (not shown) of model C and F. The underlying bivariate association, however, between the level of contracting out and the level of TCF is positive and significantly correlated (analysis not shown). This indicates that without control for / inclusion of any other factors, higher levels of contracting out are associated with higher levels of TCF.

However, this association is not straightforward and inclusion of the predictors (as found in the analysis shown in Table 42) renders the association insignificant. In particular, the additional analysis shows that the inclusion of measures for whether the department is responsible for in-house operations or not as well as the absolute economic size/value of services contracted out changes the correlation from significant to insignificant. One suggested finding is that while economic value overall should increase by increasing levels of contracting out it is more important to look at the variation in the size of the economic value than looking at the level of contracting out (in terms of a percentage of maintenance budgets). The underlying economic value of private sector involvement (for parks and roads, combined) in Danish municipalities ranges hugely from figures below DKK 3 million to figures above DKK 250 million. Intuitively, it makes sense to say that a multi-million contract, encompassing a complex organization of service provisions, demands a different contractual framework than a single million contract irrespectively of whether this represents, let's say, 10 percent or 75 percent of all maintenance services contracted out in a particular municipality.

In addition, in bivariate analyses the levels of TCF and RCF are significantly lower for those departments with operational responsibilities than those departments without operational responsibilities.⁵⁸ Thus, control for the presence of operational responsibilities will weaken the bivariate association between the variables for level of contracting out and TCF or RCF. The conclusion is that contracting levels, although it is insignificant in an alternative analysis of model A-F (see Table 42), still matters for the explanation of variations in the level of contractual framework among Danish municipalities; however, the importance is found to be rooted in the difference between the group of departments with operational responsibilities and the group without operational responsibilities.

⁵⁸ The mean difference in TCF between departments with operational responsibilities (mean score = 7.1, SD = 2.0) and without operational responsibilities (mean score = 8.2, SD = 2.0) is statistical significant ($p < .1$, $\eta^2 = .055$). The mean difference in RCF between departments with operational responsibilities (mean score = 4.6, SD = 1.8) and without departments with operational responsibilities (mean score = 5.6, SD = 2.3) is statistical significant ($p < .1$, $\eta^2 = .066$).

6.5 International Comparisons

This section explores differences and similarities between England, Sweden, Norway and Denmark in formal and informal contractual relations between municipalities and their private providers of park and road maintenance services. The UK has internationally been regarded as a ‘benchmark country’ in the implementation of new public management reforms (Barzelay, 2001). The UK is subsequently used in the main analyses below as a ‘reference country’ for comparison of means and test of the statistical significance of inter-country differences.

6.5.1 Formal contract dimensions compared across four countries

Table 9 shows the importance of 8 (or 9) formal contract dimensions in local authorities / municipalities contracts with their private providers of park and road maintenance services in the UK, Sweden, Norway and Denmark.

Table 43.

Four countries: Formal contract dimensions for managing and organizing provision of park and road maintenance services by private contractors

Importance of formal dimension ^a	Mean scores (standard deviations)										
	UK (N=57) ^b		Sweden (N=81)		Norway (N=73)		Denmark (N=67)		Four countries (N = 278) ^d		Equality of variance ^e
Juridical clauses / agreement (§§)	8.8	(1.8)	7.8 [†]	(2.8)	8.3 ^{ns}	(2.4)	7.8 *	(2.3)	8.1 *	(2.4)	No
Service specification based on functionality and purpose	7.7	(2.6)	6.1 **	(3.2)	6.3 [†]	(3.3)	6.4 [†]	(3.0)	6.6 *	(3.1)	Yes
Service specification based on quantities, instruction and performance measures	7.6	(2.8)	6.7 ^{ns}	(2.9)	7.0 ^{ns}	(2.9)	7.7 ^{ns}	(2.3)	7.2 [†]	(2.8)	Yes (p = .093)
Formal sanctions in case of non-compliance	5.8	(3.3)	5.7 ^{ns}	(3.1)	6.1 ^{ns}	(3.1)	6.7 ^{ns}	(2.9)	6.1 ^{ns}	(3.1)	Yes
Formal collaboration and joint planning	7.2	(2.8)	4.3 **	(3.3)	4.8 **	(3.2)	6.0 ^{ns}	(3.0)	5.4 **	(3.3)	Yes
Contractor's involvement / contact with users	5.6	(3.3)	3.0 **	(2.9)	2.8 **	(2.9)	2.9 **	(2.8)	3.5 **	(3.2)	Yes
Economic incentives for investment, improvements and optimization	2.8	(3.2)	2.1 ^{ns}	(2.8)	2.6 ^{ns}	(2.9)	2.8 ^{ns}	(2.8)	2.6 ^{ns}	(2.9)	Yes
Competence requirements	7.0	(2.8)	6.5 ^{ns}	(2.7)	6.4 ^{ns}	(2.9)	6.6 ^{ns}	(2.4)	6.8 ^{ns}	(2.7)	Yes
Delivering local benefits ^c	4.5	(3.6)	-	-	-	-	-	-	-	-	-

Source: INOPS survey data

^a All items measured on a scale from 0 to 10 (0 = ‘not at all’, 10 = ‘very high degree’) on the question. “On a scale from 0 to 10, please indicate in which degree the following content is a central part of your department’s arrangements with private contractors”.

^b UK is used as a ‘benchmark country’ in the table for comparison of differences between the four countries (one-way anova with Tukey and Games-Howell post hoc tests, Levene’ test for equality of variance, p <.05). Significance levels: [†] p < .1, * p < .05, ** p <.01, ns = non-significant.

^c Item only included in UK survey.

^d Test for significance of differences between at least one country and the others (one-way anova).

^e Levene’s test for equality of variance, p-level = .05.

The UK is used in the main analysis (Table 9) as a reference country for comparison of means and test of the statistical significance of inter-country differences. Overall, the mean scores for the four countries indicate that substantial differences exist between the countries. In the main analysis, the differences are found to be statistically significant for 5 out of 8 formal contract dimensions. In addition a ninth item (requirements in the contract for “*delivering local benefits*”) regarded as highly country relevant was included solely in the survey for UK. No statistical significant differences is found in the main analysis for the contract dimensions: “*formal sanctions in case of non-compliance*”, “*economic incentives for investment, improvements and optimization*” and “*competence requirements*”. However, a direct comparison between Denmark and Sweden shows that the difference for “*formal sanctions in case of non-compliance*” is statistically significant ($p < .05$).

The UK in particular stands out in the comparison with the three Scandinavian countries regarding the importance of “*formal collaboration and joint planning*” and “*contractor’s involvement / contact with users*”. The differences for both dimensions are highest in absolute or relative terms (mean differences) and statistically significant ($p < .01$). In addition the item for “*delivering local benefits*” may also be added to the list of notable differences. The 2 (or 3) dimensions can all be associated with ‘collaborative’ or ‘partnership’ approaches to contracting out. The findings indicate that municipalities in the UK compared to the three Scandinavian countries use the most formalized and complex contractual frameworks including both transactional and relational aspects when they contract out park and road maintenance.

6.5.1.1 Differences in Scandinavia

By inspection of mean scores in Table 9 it is also found that some notable differences exist among the three Scandinavian countries. In particular, Danish municipalities have in comparison with Swedish and Norwegian municipalities higher mean scores for “*Service specification based on quantities, instruction and performance measures*”, “*formal sanctions in case of non-compliance*” and “*formal collaboration and joint planning*”. Danish municipalities have also mean scores for the remaining formal contract dimensions roughly at level with Norwegian and Swedish municipalities. Statistical test of the differences shows that the difference for “*formal collaboration and joint planning*” is more pronounced than for the “*Service specification based on quantities, instruction*”

and performance measures” and “formal sanctions in case of non-compliance”.⁵⁹ The differences indicate that in Scandinavia Danish municipalities on the average use slightly more formalized and complex contractual frameworks including both transactional and relational aspects when they contract out park and road maintenance.

6.5.2 Informal contract relations compared across four countries

Table 44 shows level of institutionalization of behavioral norms in relations between local authorities / municipalities in the UK, Sweden, Norway and Denmark and their private providers of park and road maintenance services.

Table 44.

Four countries: The degree of institutionalization of behavioral norms in relations with private providers of park and road maintenance services

Institutionalization of behavioral norm ^a	Mean scores (standard deviations)										Equality of variance ^d
	UK (N=57) ^b		Sweden (N=77)		Norway (N=72)		Denmark (N=68)		Four countries (N = 274) ^c		
'Collaboration'	8.3	(1.9)	7.8 ^{ns}	(1.9)	8.2 ^{ns}	(1.7)	8.1 ^{ns}	(1.4)	8.1 ^{ns}	(1.7)	No
'Mutuality'	7.4	(1.8)	6.9 ^{ns}	(2.3)	7.3 ^{ns}	(2.2)	6.6 ^{ns} (p=.155)	(2.2)	7.1 ^{ns} (p=.119)	(2.2)	Yes
'Flexibility'	7.4	(2.0)	7.1 ^{ns}	(1.9)	7.4 ^{ns}	(1.8)	7.5 ^{ns}	(1.7)	7.3 ^{ns}	(1.9)	Yes
'Lack of opportunism'	7.2	(2.7)	6.2 ^{ns}	(2.9)	6.8 ^{ns}	(2.5)	6.8 ^{ns}	(2.2)	6.7 ^{ns}	(2.6)	No
'Trust'	5.5	(3.4)	5.2 ^{ns}	(3.0)	4.2 [†]	(3.2)	5.4 ^{ns}	(2.7)	5.0 [†]	(3.1)	Yes
'Solidarity'	6.7	(2.8)	6.8 ^{ns}	(2.4)	7.3 ^{ns}	(2.2)	6.8 ^{ns}	(2.3)	6.9 ^{ns}	(2.4)	yes

Source: INOPS survey data

^a All items measured by the respondent's agreement with the statement on an 11-point response scale with anchors (0 = 'not at all' and 10 = 'very high degree').

^b UK is used as a 'benchmark country' for comparison of differences with three other countries (one-way anova with Tukey and Games-Howell post hoc tests). Significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Test for significance of differences between at least one country and the others (one-way anova).

^d Levene's test for equality of variance, p-level = .05.

The UK is used in the main analysis (reported in Table 44) as a reference country for comparison of means and test of the statistical significance of inter-country differences. The differences in mean scores between the countries for the various items are low. Overall, the main analysis of the statistical significance of mean scores shows only a significant difference between the four countries in the level of institutionalization of the item for 'trust'. The level of institutionalization of

⁵⁹ ONE-WAY ANOVA with Bonferroni post hoc test. The differences in mean scores between Denmark (benchmark) and Norway and Sweden are only statistically significant for 'formal collaboration and joint planning' (p = .051 for Norway and p = .003 for Sweden). The differences for 'Service specification based on quantities, instruction and performance measures' is only statistically significant (p = .059) between Denmark and Sweden (and not significant between Denmark and Norway). The differences for 'formal sanctions in case of non-compliance' are close to being statistically significant (p = .117) between Denmark and Sweden (and not significant between Denmark and Norway).

'*trust*' in Norway (mean score = 4.2), measured by the item '*trust*', is found significantly lower ($p < .1$) than in the UK (mean score = 5.5). However, it should be noted that the item for '*lack of opportunism*' can also be interpreted as a measure for trust. No statistical differences among the countries are found for this item. This finding indicates that differences in trust levels might be lesser than indicated by an analysis of the item for '*trust*' alone.

Further analysis (not shown) finds that the difference in '*mutuality*' between Denmark (mean score = 6.6) and the UK (mean score 7.4) are statistically significant ($p < .05$) if the two countries are compared directly (without including Sweden and Norway in the analysis). Similarly, the difference between Denmark and Norway in a two country comparison is statistically significant ($p < .1$) for '*mutuality*' and '*trust*'. The mean score for '*mutuality*' is higher for Norway while the mean score for '*trust*' is higher for Denmark.

6.5.3 Contract durations compared across four countries

Table 45 shows the average duration of ordinary contracts and optional extension for contracts used by local authorities / municipalities in the UK, Sweden, Norway and Denmark for private provision of park and road maintenance services. The UK is used in the analysis as a reference country for comparison of means and test of the statistical significance of inter-country differences.

Table 45.
Four countries: Durations (ordinary and extension) for park and road maintenance contracts

Contract length (in years) ^a	Means (standard deviations) ^c								Equality of variance ^e		
	UK (N=51/22) ^b		Sweden (N=40/56)		Norway (N=9/55)		Denmark (N = 40/56)			Four countries (N = 140/189) ^d	
Parks											
Ordinary contract length	5.5	(4.3)	3.4 *	(2.5)	2.2 *	(.8)	3.2 **	(1.2)	4.1	(3.2) **	No
Extension length	3.9	(3.8)	2.8 ^{ns}	(3.3)	2.4 **	(.5)	1.7 **	(.7)	2.7	(3.0) **	No
Roads											
Ordinary contract length	7.3	(7.2)	3.2 †	(1.7)	3.5 †	(1.0)	4.1 ^{ns}	(2.9)	4.0	(3.3) *	No
Extension length	5.3	(4.8)	1.9 *	(1.7)	1.3 *	(.8)	1.6 *	(.8)	2.0	(2.2) **	No

Source: INOPS survey data (N=140 for parks, N=189 for roads).

^a All items measured in years. Respondents were required to indicate the typical duration (ordinary and extension) of their main maintenance contracts for respectively parks and roads.

^b UK is used as a 'benchmark country' for comparison of differences between the four countries (ONE-WAY ANOVA with Games-Howell post hoc test). Significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Number of cases (N) for respectively parks and roads in brackets.

^d Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^e Levene's test for equality of variance, p-level = .05.

The average figures show that the longest contract durations for both parks and road maintenance contracts is found in the UK. For parks, the average ordinary contract duration is 5.5 years and the average contract extension is 3.9 years. The differences in ordinary contract duration compared to Sweden, Norway and Denmark are substantially in terms of years and have statistical significance.

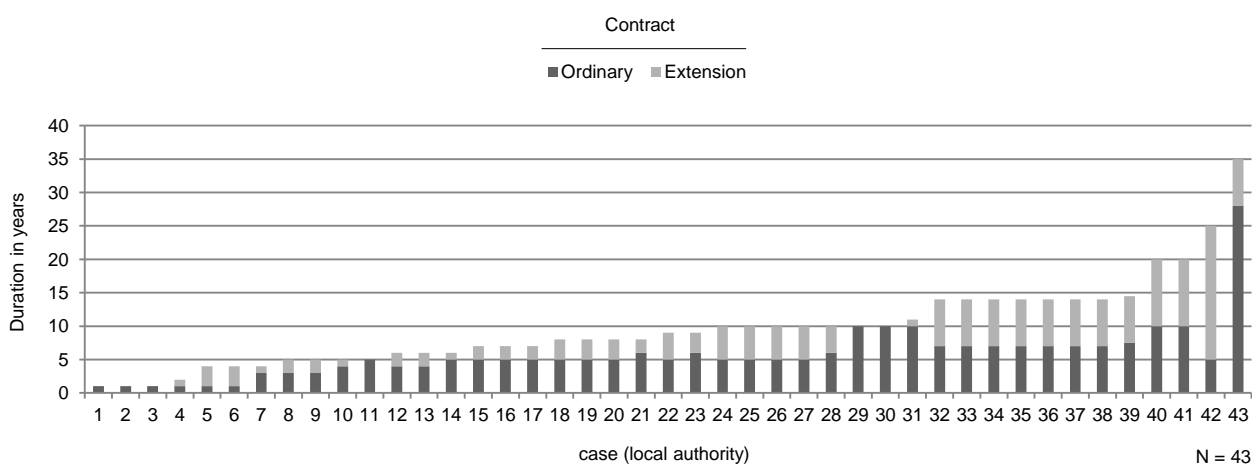
For roads, the average ordinary contract duration in the UK is found to be 7.3 years and the average contract extension is 5.3 years. The differences in ordinary contract duration compared to Sweden, Norway and Denmark are substantially in terms of years and have statistical significance.

For both parks and roads it is indicated that in all four countries it is customary to include an optional extension of the ordinary contract duration.

The inter-municipal differences in contract duration are also (very) large in the UK for both park and road maintenance contracts. Figure 23 shows the average duration for ordinary contracts

and the included option for extensions in 43 UK local authorities⁶⁰. Most local authorities adopt ordinary contract durations between 5 to 7 years, but some municipalities adopt longer durations of 10 years or more while others retain a very short contract ordinary durations of 1 year only. If the total duration for UK local authorities’ park maintenance contracts (ordinary plus extension) is calculated for about one half of the local authorities use total contract durations less than 10 years while the other half use total contract durations of 10 years or longer.

Figure 23.
Contract durations in UK local authorities’ park maintenance contracts with private providers.



Source: INOPS survey data. The figure only includes data for municipalities which provided data for both duration of ordinary contract and optional contract extension (park maintenance contracts). Case 13 in the figure is strongly deviating in terms of extension duration, but the respondent’s comments validate its correctness.

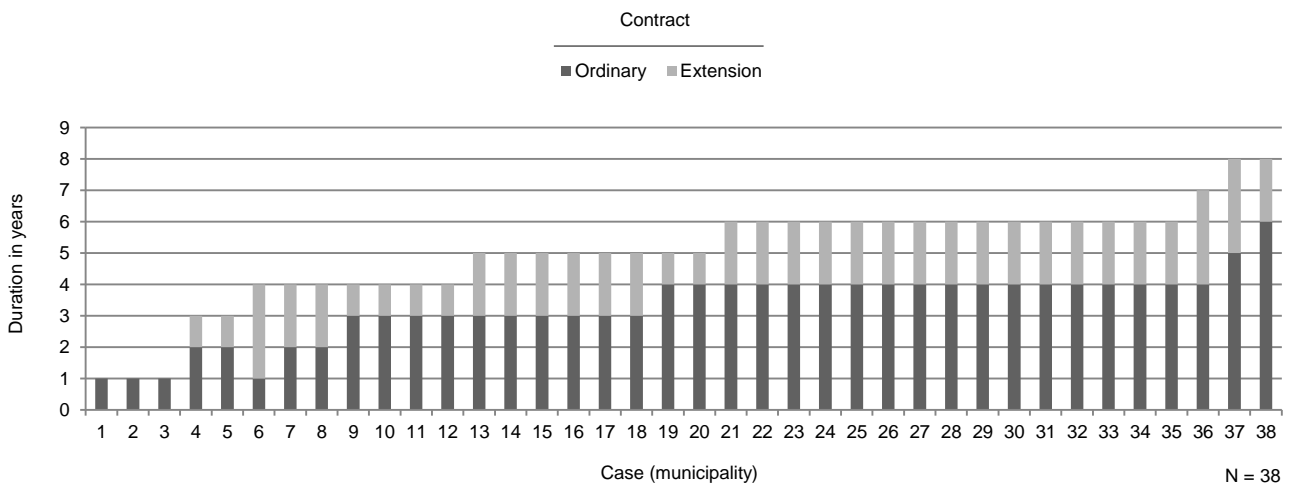
A few comments in the survey (collected from open ended questions) indicate that contracts of shorter duration (e.g. one year) comprise specialized or complementary tasks. In one case from UK it was noted that *“We only let contracts for specialist areas of work e.g. hedge cutting, tree work, grave digging.”* Comments from other countries also indicated that the type of service was important for the chosen length of contract, e.g. *“[Duration] varies pending on the type of service”*, or *“different durations for asphalt, signage, lighting, ...”*. One comment indicated that contract duration also could depend on factors not directly associated with the immediate characteristics of the service, but on the context of service provision: *“we have slightly different contract durations which can depend on upcoming changes within an area such as renewals or similar.”* Further statistical analysis (not shown) shows that contract duration (ordinary and

⁶⁰ The figure only includes municipalities which provided data for the duration of both the ordinary contract and extension.

extension) in all countries is strongly and significantly correlated with the percentages of services contracted out for both parks and roads, i.e. longer durations is associated with higher levels of contracting out.

Figure 24 displays similar data for Danish municipalities that is displayed for UK municipalities in Figure 23. If the total duration for Danish municipalities' park maintenance contracts (ordinary plus extension) is calculated for the vast majority of municipalities use total contract lengths between 4 to 6 years (31 out of 38 municipalities).

Figure 24. Contract durations in Danish municipalities' park maintenance contracts with private providers



Source: INOPS survey data. The figure includes data only for municipalities which provided data for both duration of ordinary contract and optional contract extension (park maintenance contracts).

In Scandinavia, Sweden has the largest inter-municipal variation in ordinary contract duration for parks, while Denmark has the highest inter-municipal variation in ordinary contract duration for roads. The higher variation in Denmark is partly explained by a number of cases where the contract duration is indicated to be 10 years or longer. Comments by several respondents in the Danish survey furthermore indicated that long-term performance based contracts for road maintenance is more widely used in Denmark than the average mean for ordinary contract duration for roads indicates. The data indicates that about one-fifth of all Danish municipalities use contract durations for road maintenance of 10 years or longer. In a comparative perspective the analysis of contract length sustain the findings from the analysis of formal contract dimensions. In a four country

comparison, the municipalities in the UK employ contracts with the longest duration while Danish municipalities employ the longest contract durations.

7 ANALYSIS – OUTCOMES

7.1 Outcomes from the use of private contractors

This chapter delivers an analysis of outcomes from the use of private contractors to provide park and road maintenance in Danish municipalities. The analysis explores several outcomes from using private contractors. Key outcomes include cost effects from procurement as well as satisfaction with performance. Outcomes are furthermore compared across Denmark, Sweden, Norway and UK.

The chapter addresses the following research questions:

- A. What are the cost effects from contracting out road and park maintenance services?
- B. What explains differences in cost effects from contracting out road and park maintenance services?
- C. What is the satisfaction with private contractors' performance of road and park maintenance?
- D. What explains differences in satisfaction levels with private contractors' performance of road and park maintenance?

7.1.1 Measures

The analysis is based on two different key measures for contracting outcomes. Both measures are based on responses from municipal park and road managers. The first measure is based on estimates for the cost effects from the last round of procurement for contracted out services. The second measure is based on evaluations of satisfaction levels with six different performance dimensions.

7.1.1.1 Performance of private contractors

For evaluation of performance respondents could indicate their evaluation of altogether six items (performance dimensions) on a unipolar 11-point response-scale with two end anchors, where 0 = 'very unsatisfactory' to 10 = 'very satisfactory'. The question was formulated separately for parks and roads and worded as following (example for parks and green spaces):

Specify on a scale of 0 to 10 your level of satisfaction with the work private contractor(s) have undertaken in parks and green spaces in relation to:

- *General quality of the service provided*
- *General pricing and cost levels of the service provided*
- *Flexibility to change and/ or improve services if required*
- *Follow up and solving of problems and deficiencies in the service provided*
- *Development and innovation of maintenance*
- *Fulfilment of long-term objectives for areas and facilities*

The question was included in the surveys for Denmark, Sweden, Norway and UK. It should be noted that national languages have been used for all surveys. Please see appendices for exact formulations in national languages.

7.1.1.2 Cost effects from public procurement

For evaluation of cost effects from the use of public procurement respondents in Denmark, Sweden and Norway were asked to indicate change in cost/prices levels (in percentage) for services contracted out. The question was formulated separately for parks and roads and worded as following (Please see appendices for exact formulations in national languages):

To which degree to you estimate in percent that contracted out services have become cheaper or more costly after last time they were procured? (Consider changes in the total estimated operational costs before and after the procurement)?

Overall, operational maintenance costs for the procured service have approximately become:

___ pct. more costly

___ pct. cheaper

___ either more expensive or cheaper

___ don't know

The survey for UK included a different item for measurement of cost effects. The research teams in the three Scandinavian countries evaluated a *continuous* response format to be able to provide valid information. However, the research team responsible for the UK survey evaluated the most appropriate response option to be a *categorical* format. In conjunction with the item for cost effects

the UK survey furthermore included response options the effect on quality levels. The question was formulated separately for parks and roads and worded as following:

What has been the impact, on costs and quality of maintenance work, of the last round of contracting out?

Please tick the most relevant statement.

- no change in cost or quality
- a cost saving with enhanced quality
- a cost saving, same quality
- a cost saving but a loss of quality
- a cost increase but with enhanced quality
- a cost increase, same quality
- a cost increase with loss of quality
- don't know.

A subsequent transformation of continuous data into categorical data from Denmark, Sweden and Norway allowed for direct comparison of cost effects across all countries.

7.1.2 Key findings and perspectives

7.1.2.1 Cost effects (question A)

Cost effects from the use of public procurement when park and road maintenance services are contracted out were found to vary greatly. The variation were found both between municipalities within a country and between countries. In Denmark, the INOPS study shows that almost one-half of all municipalities (45 %) have gained a reduction in operational cost last time they procured a park or road maintenance service. The average cost change was found to be a cost reduction around 5.5 % (un-weighted mean) for parks and roads combined. In Sweden, the average cost change was found to be a cost reduction around 2.7 % (un-weighted mean) for parks and roads combined. 33 % of Swedish municipalities experienced a cost decrease. In Norway, the average cost change was found to be a cost increase around 10.3 % while only 12 % of the municipalities experienced a coat decrease. For the UK, it was found that 77 % of all municipalities experienced a cost decrease last time they publicly procured a park of road maintenance service.

7.1.2.2 Explanations of differences in cost effects (question B)

In Denmark, higher levels of cost reduction in operational costs were found in particular to be related to the first or second time (compared to the third time or more) maintenance services were

contracted out, an emphasis on a ‘low cost contracting strategy’, as well as more well-developed contractual framework (transactional dimension). Also, a larger economic size of private sector involvement (adjusted for scale differences between the park and road sector, i.e. ‘frog ponds’ effects) was indicated to be related with higher levels of cost reductions.

In Sweden, higher levels of cost reductions were found to be related to higher levels of competition as well as a geographical location in the Southern and Eastern parts of Sweden (compared to the Northern parts of Sweden). In Norway, less detrimental cost effects (in terms relatively lower degrees of cost increases) were found to be related to higher levels of competition established by continued use of public procurement. In other words, municipalities which had used public procurements a greater number in the past had ‘generated’ higher levels of competition. In the UK, a higher chance of cost reduction in operational costs were found to be related to lowering of quality standards (but not with a negative influence on managers’ satisfaction with provided quality levels) as well as a greater emphasis on a ‘low cost contracting strategy’. It was also indicated that cost reductions has been achieved to a greater extent in the road sector compared to the park sector.

Several contextual characteristics of importance were highlighted when differences in cost effects were compared across countries. Denmark was found to be characterized by a relatively competitive and ‘matured’ context for contracting out (evenly distributed across the country). Sweden was found to be characterized by a longer tradition for contracting out and well-developed markets within certain regions while Norway was found to be characterized by generally less well-developed markets. In comparison, Local Authorities in the UK, Danish municipalities, and Swedish municipalities to some extent, have been able to tap directly into already established markets when they procured the last time. In contrast, Norwegian municipalities have been challenged by using public procurement in poorly functioning markets.

Across the four country contexts it was found that a ‘low cost contracting strategy’ in general has worked out well, i.e. produced cost savings, for municipalities in Denmark and the UK, but not for municipalities in Norway and Sweden. Competition, and in particular *lack of* competition, was also found to be important for cost effects.

7.1.2.3 *Satisfaction with performance (question B)*

Satisfaction levels with private contractors’ performance of park and road maintenance services were found to differ in some extent between municipalities as well as across the four countries.

However, some similarities in satisfaction levels were also found. In general satisfaction levels with private contractor's performance of maintenance services (parks and roads, respectively) was highest among Local Authorities in the UK, followed by municipalities in Denmark with the second highest overall satisfaction level and municipalities in Sweden with the third highest overall satisfaction level. Municipalities in Norway are the least satisfied. The country differences were more pronounced for the park sector compared to the road sector.

7.1.2.4 Explanations of differences in satisfaction with performance (question D)?

Analysis of factors which help explain differences in satisfaction levels with performance was only carried out for Denmark. The most important factors promoting higher satisfaction levels with performance were 1) the level of competition, 2) higher levels of collaborative norms as well as more 3) elaborative contractual frameworks. The levels of competition and collaborative norms were important for the managers' satisfaction with almost all performance dimensions. Different dimensions of the contractual framework, however, were found to be important for satisfaction levels of different performance dimensions.

It was also found that 'interactions' between different factors affected the associations with the satisfaction with performance. In particular, mutual collaborative behaviours enable the contracting parties to enable a more flexible approach to the contract (the TCF dimension) with positive effects for some performance dimensions. In other words, when a higher degree of collaborative norms are present the parties to the contract can enact and adopt the TCF dimension for improved performance. On the other hand, when collaborative norms are lacking it is likely that the parties becomes caught in a rigid contractual framework embedded in the juridical clauses, detailed technical work description and the procedures for sanctions in case of non-compliance. Collaborative behaviours were also found to be 'nourished' by a formalized collaborative framework (RCF). In other words, then a formal collaborative framework is in place, collaborative norms within the relation are (formally) supported and develop within the relations.

Economic size of the engagement with private contractors was also found important for satisfaction levels under certain conditions. In particular a larger economic size was found to improve satisfaction with performance regarding development. The effect, however, takes place in municipalities which contract out only a smaller share of their maintenance services. The result indicates that satisfaction with development mainly is higher in municipalities of a certain size.

7.2 Cost effects

Table 46 shows the cost effects on contracted out services from Danish municipalities' last round of procurement of park and road maintenance services. Estimates for cost effects were provided for 35 municipalities in the case of park maintenance and for 47 municipalities in the case of road maintenance. The data do not specify the subtype(s) of maintenance service(s) within each service sector that were included in the procurement.

The un-weighted average cost change is a 5.1 % decrease (i.e. -5.1 %) for park maintenance and a 5.8 % decrease for road maintenance. The average cost change for both park and road maintenance is 5.5 %. Statistical test of the difference between cost effects between parks and roads shows that the difference is insignificant. The highest cost decrease is reported to be 50 % while the highest cost increase is reported to be 16 %.

Table 46.

Cost effects from contracting out park and road maintenance after last round of procurement (Denmark).

	Change in cost levels		
	Parks	Roads	Parks and Roads
N	35	47	82
Mean (un-weighted)	- 5.1 %	- 5.8 %	- 5.5 %
Std. dev.	10.0 %	11.6 %	10.8 %
Min. value (decrease)	- 30 %	- 50 %	- 50 %
Max. value (increase)	16 %	10 %	16 %

N=82

The table reports about the quantified economic effects from contracting out after last procurement.

All data based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate cost decrease while positive values indicate cost increase.

Table 47 shows the direction of self-reported estimates for cost change from the municipalities' last round of procurement of park and road maintenance services. The data for the table is based on a transformation of self-reported estimates for cost effects into categorical data for the direction of cost change (i.e. 'decreased costs', 'no cost change' and 'increased costs'). For parks and roads combined, cost decreases were reported in altogether 37 cases, cost increases were reported in 5 cases and no cost changes were reported in 40 cases. Table 47 also includes data for respondents answering with a 'don't know' as well as respondents providing no answer. For a relatively high frequency of municipalities (21 %), the respondents indicated that they didn't know whether the last

round of procurement of parks and roads has resulted in a cost change. Also, a relatively high frequency (15 %) didn't provide any answer.

Table 47.
Direction of self-reported estimates on cost change from last times services were contracted out.

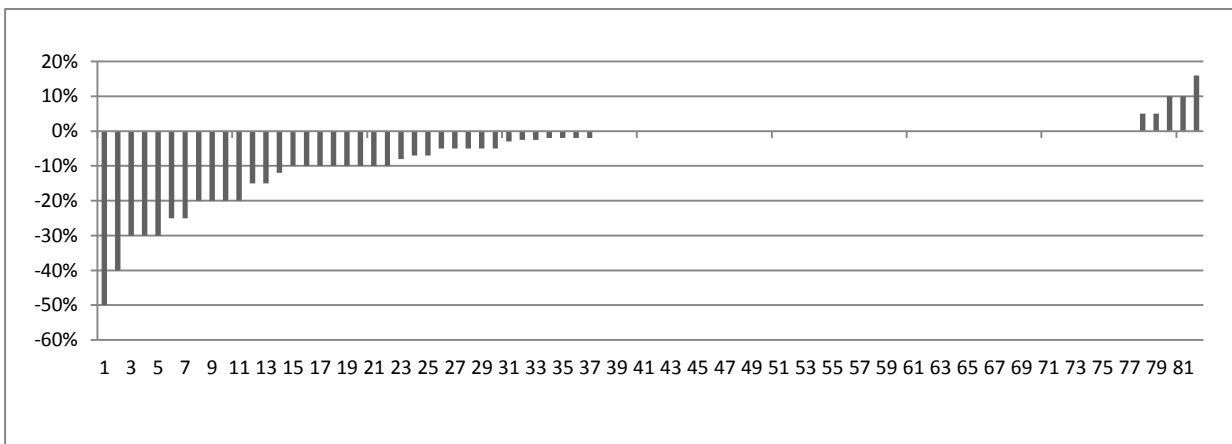
	Frequencies					
	Parks		Roads		Parks and Roads	
	Absolute	Relative	Absolute	Relative	Absolute	Relative
N	60	100%	69	100%	129	100%
Decreased costs	15	25%	22	32%	37	28%
No cost change	18	30%	22	32%	40	31%
Increased costs	2	3%	3	4%	5	4%
Don't know	11	18%	16	23%	27	21%
No answer	14	23%	6	9%	20	15%

The table reports about the direction of self-reported estimates on cost change from last time services were contracted out.

Data is based on the number of responses to questions on the effects on the total price and cost level for services contracted out after the last round of procurement for park and roads.

Figure 25 shows a visualization of the distribution of cost changes for all cases including reported cost effects for procurement of both roads and parks (N = 82).

Figure 25.
Cost changes from last procurement in 82 cases of contracting out park and road maintenance (N = 82)



7.3 Exploring differences in cost effects

The analysis of reported cost effects found substantial variation among Danish municipalities. The following section explores a set of factors which help explain variations in cost effects. The key factors include:

- Purpose of contracting out
- Procurement history
- The level of contractual framework
- Economic size of private sector involvement

7.3.1 Importance of low cost as purpose

This section explores the importance contracting purpose for cost effects from the last round of public procurement of park and roads maintenance. Table 48 shows an analysis of the differences in cost effects between groups with respectively higher and lower emphasis on cost reduction as the purpose for contracting out.

Table 48.
Differences in cost effects between municipalities with higher and lower emphasis on low cost as purpose for using private contractors

Cost effects ^a	Mean scores for low cost as purpose ^d		Difference ^b	ETA SQ
	Higher emphasis ^c	Lower emphasis ^c		
Cost effects, roads (N=47)	- 8.2 %	- 2.6 %	5.6 ^{ns} (p = .104)	.058
Cost effects parks (N=35)	- 7.9 %	- 0.4 %	7.5 *	.140
Cost effects parks AND roads (N=82)	- 8.0 %	- 1.7 %	6.3 **	.083
Emphasis on low cost (N=67)	8.7	5.6	3.1 **	.587
Level of contracting out, roads (N=64)	52 %	45 %	7 % ^{ns}	.022
Level of contracting out, parks (N=66)	35 %	20 %	15 % [†]	.054

Source: INOPS survey data (N = 65)

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Score differences evaluated at significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

^c Groups based on median value for purpose: cost effective maintenance (median value = 8).

^d Findings for cost differences are congruent with analysis of the bivariate correlations between continuous data for cost effects and the emphasis on low cost as purpose for contracting out. Pearson's and significance levels for bivariate relations: parks = -.476[†], roads = -.300*, parks and roads combined = -.366**.

Overall the analysis shows that the differences in cost change are statistically different between the groups with higher and lower emphasis on low cost as purpose. The group with higher emphasis on low cost has obtained an 8.2 % cost decrease for roads, a 7.9 % cost decrease for parks and an 8.0

% cost decrease for parks and roads. The group with lower emphasis on low cost has obtained a 2.6 % cost decrease for roads, a 0.4 % cost decrease for parks and a 1.7 % cost decrease for parks and roads. Analysis of the underlying bivariate relationship based on continuous data shows that correlations with cost effects for respectively parks, roads and parks and roads combined are all strong (measured by Pearson's correlation coefficients) and statistically significant. In sum, the analyses of parks, roads and parks and roads combined indicates that, on the average, high emphasis on low cost as purpose is positively associated with cost savings for contracting out of parks and roads.

7.3.2 Importance of procurement history

This section explores the bivariate relationship between the number of past procurement rounds ('procurement history') and cost effects. Table 49 shows the average cost change for the number of procurements in the past ten years. The average cost change is an 11.4 % reduction in cases with a single procurement round in the past ten years. The average cost change is a 3.8 % reduction in cases where four or more procurements has been carried out within the past ten years. The table shows that the average cost reduction becomes significantly lower with an increasing number of procurements. Test statistics furthermore shows that the relationship is linear (at p-level < .05). An inspection of the underlying data found that the high standard deviation for cases with four or more past procurements (S.D. = 11.9) is strongly influenced by a single case which reports a 50-percent cost reduction.

Table 49.
Distribution of average cost changes according to the number of procurements in the past ten years.

Number of procurements in the past ten years	Mean change	N	S.D.
One	- 11.4 %	13	10.5
Two	- 7.9 %	13	9.2
Three	-3.2 %	13	5.9
Four or more	-3.7 %	43	11.9
All cases	-5.5 %	82	10.8

Note: The linear difference between the four categories is significant at p-level < .05.

Table 50 shows the distribution of the direction in cost change in the last round of procurement of roads and parks maintenance according to the number of procurements in the past ten years. This analysis is based on a transformation of the underlying continuous data for cost effects into three

categories which represent cases with respectively cost decreases, no cost change and cost increases in operational cost as a result of the last procurement round in the municipality (for respectively parks and roads). Table 50 is based on valid answers from all Danish municipalities which provided estimates for the effect from the last round of procurement on costs levels for contracted out parks and road maintenance services. Overall, the analysis indicates that the chance of cost savings are higher the first or second time a municipality contract out a service compared to the third round or more. The finding is also illustrated in Figure 26.

Table 50.

Distribution of direction in cost change for contracting out roads and parks according to the number of procurements in the past ten years

Number of procurements in the last ten years	Decreased costs		No cost change		Increased costs		Total (row)	
	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative
<i>Four times or more</i>	13	30 %	25	58 %	5	12 %	43	100 %
<i>Three times</i>	5	38 %	8	62 %	0	0 %	13	100 %
<i>Two times</i>	9	69 %	4	31 %	0	0 %	13	100 %
<i>One time</i>	10	77 %	3	23 %	0	0 %	13	100 %
Total (row)	37	45 %	40	49 %	5	6 %	82	100 %

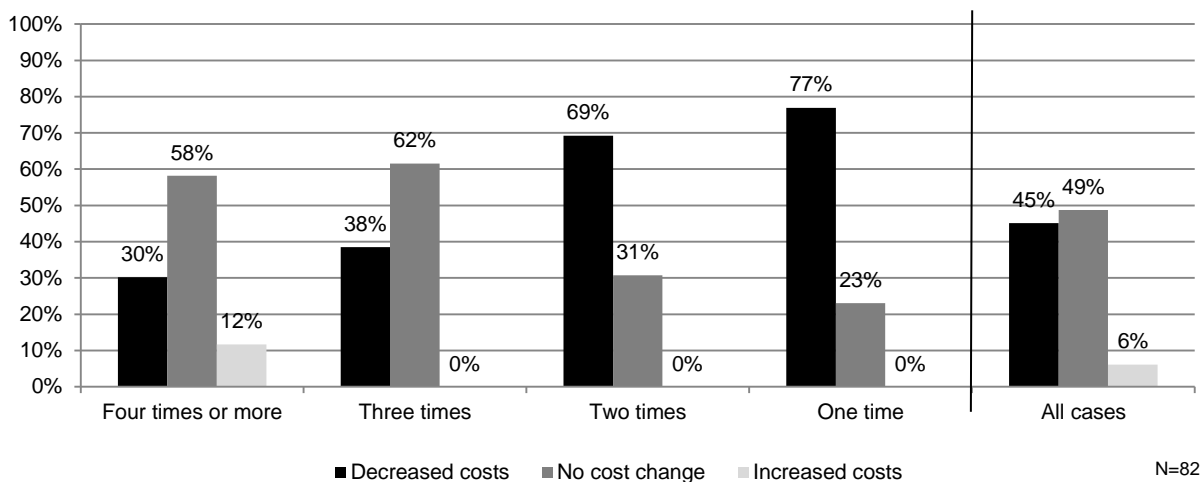
N=82

The table reports about the distribution of direction in cost change for contracting out roads and parks according to the number of procurements in the past ten years.

Figure 26 provide a visual presentation of the association between the number of past procurements and the direction of cost change. Estimates from 45 % of the municipalities (with valid answers) indicated a decrease in costs. Estimates from 49 % of municipalities (with valid answers) indicated no change in costs while estimates from 6% of the municipalities (with valid answers) indicated a cost increase.

In the group which had one round of procurement in the past ten years the majority (77 %) indicated a cost decrease. In the group which had two rounds of procurement in the past ten years the majority (69 %) indicated a cost decrease while the remaining (31 %) indicated no cost change. In the group which had three rounds of procurement in the past ten years the majority (62 %) indicated no cost change while the remaining (38 %) indicated a cost decrease. In the group which had four rounds or more of procurement in the past ten years the majority (58 %) indicated a no cost change, while 30% indicated a cost decrease and 12 % indicated a cost increase.

Figure 26.
Number of procurements in the past ten years and direction of cost change for services contracted out



7.3.3 Importance of contractual framework

This section explores the bivariate relationship between the formalized contractual framework and cost effects. The relationship is explored in two analyses based on different measurements of cost effects. In the first analysis, cost effects are measured by the average size of cost change in percent (as continuous data). In the second analysis, cost effects are measured by the direction of cost change in individual cases (as categorical data). Overall, the two analyses show that the (bivariate) relation between cost savings and a higher level of formalized transactional contractual framework is statistically significant while a relation between cost savings and formalized relational contractual framework is statistically insignificant. Although the relationship between cost effects and the formalized relational contractual framework is found to be statistically insignificant the average estimates for cost effects for park maintenance indicates an ‘inclination’ toward cost savings (average cost savings is 6.2 % for cases with high level of formalized relational contractual framework while average cost savings is 2.7 % for cases with a low level). The inclination is opposite for roads. The opposite inclinations for respectively parks and roads indicate that the role of formalized relational contractual frameworks might to differ between the park and road sectors. The relative low N in the analysis (N = 46 for roads and N = 35 for parks) as well as differences in the distribution of cost estimates (e.g. standard deviations) are likely to explain the lack of statistical significance in the comparison of otherwise seemingly notable differences in the cost estimates shown in the analyses below.

Table 51 and Table 52 shows the analysis of the relationship between cost effects and formalized contractual frameworks based on measurement of cost effects as the percent of cost change in operational costs from the last procurement round. Table 51 shows the analysis of importance of the formalized transactional contractual framework (TCF) while Table 52 shows the analysis of importance of the formalized relational contractual framework (RCT). Overall, the analysis of parks and roads combined shows that a higher level of TCF is significantly correlated ($p < .05$) with a higher level of cost savings on the average. The finding is more pronounced for the analysis of roads compared to the analysis of parks. The analysis for parks alone shows no significant correlation between the level of TCF and cost effects ($p > .1$) although a visual inspection of the estimates for cost effects for the two groups shows what can be interpreted as being of a notable difference (3.5 percent points).

Table 51.

Differences in cost effects from last procurement between municipalities with high and low levels of formalized transactional contractual framework (TCF).

Cost effect ^{a,b}	Mean scores			ETA SQ
	Higher level of TCF ^c	Lower level of TCF ^c	Difference ^d	
Cost effect, roads (N=46)	-8.2 %	-1.8 %	6.4 [†] ($p = .067$)	.074
Level of TCF, roads (N=46)	9.0	5.5	3.5 **	.771
Level of contracting out, roads (N=46)	56.9 %	50.3 %	6.6 ^{ns}	.018
Cost effect, parks (N=35)	-6.5 %	-3.0 %	3.5 ^{ns}	.031
Level of TCF, parks (N=35)	8.9	5.5	3.4 **	.664
Level of contracting out, parks (N=35)	44.7 %	38.9 %	37.5 **	.007
Cost effect, parks AND roads (N=81)	-7.5 %	-2.3 %	5.2 *	.055
Level of TCF, parks AND roads (N=81)	9.0	5.5	3.5 **	.691
Level of contracting out, parks AND roads (N=81)	51.6 %	45.3 %	6.3 ^{ns}	.011

Source: INOPS survey data

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Findings for cost differences are congruent with analysis of the bivariate correlations between continuous data for cost change and level of transactional contractual framework. Pearson's r and significance levels for bivariate relations: parks = $-.240^{ns}$, roads = $-.270^†$, parks and roads combined = $-.258^*$.

^c Groups based on median value for formalized transactional contractual framework for all cases in the dataset with valid entries (median value = 7.5).

^d Differences evaluated at significance levels (SPSS ANOVA): [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant.

The analysis of the relationship between cost effects and RCF finds no statistically significant correlation ($p < .1$) between the size of cost effects and the level of RCF for either parks, roads or park and roads combined. This finding is supported by bivariate correlational analysis (Pearson's) based on the original continuous data for RCF. However, visual inspection of the estimates for the average size of cost savings in the two groups indicate that for parks a inclination toward cost savings may be associated with higher levels of RCF while the opposite is indicated for roads.

Table 52.

Differences in cost effects from last procurement between municipalities with high and low levels of formalized relational contractual framework (RCF).

Cost effect ^{a,b}	Mean scores			ETA SQ
	Higher level of RCF ^c	Lower level of RCF ^c	Difference ^d	
Cost effect, roads (N=46)	-5.2 %	-7.2 %	2.0 ^{ns}	.007
Level of RCF, roads (N=46)	6.2	2.7	3.5 ^{**}	.609
Level of contracting out, roads (N=46)	55.9 %	49.4 %	6.5 ^{ns}	.016
Cost effect, parks (N=35)	-6.2 %	-2.7 %	3.5 ^{ns}	.027
Level of RCF, parks (N=35)	6.4	2.9	3.5 ^{**}	.583
Level of contracting out, parks (N=35)	46.2 %	34.1 %	12.1 ^{ns}	.027
Cost effect, parks AND roads (N=81)	-5.7 %	-5.4 %	0.3 ^{ns}	.000
Level of RCF, parks AND roads (N=81)	6.3	2.8	3.5 ^{**}	.598
Level of contracting out, parks AND roads (N=81)	51.6 %	43.2 %	8.4 ^{ns}	.018

Source: INOPS survey data

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Findings for cost differences are congruent with analysis of the bivariate correlations between continuous data for cost change and level of relational contractual framework. Pearson's and significance levels for bivariate relations: parks = .022^{ns}, roads = .069^{ns}, parks and roads combined = .059^{ns}.

^c Groups based on median value for formalized relational contractual framework for all cases in the dataset with valid entries (median value = 4.5).

^d Differences evaluated at significance levels (SPSS ANOVA): [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

Table 53 and Table 54 show analysis of the (bivariate) relationship between the level of the formalized contract and a categorical variable for cost effects. The analysis is only based on cases for parks and roads combined. In the analysis shown in Table 53 and Table 54, the continuous data for the size of cost effects (used in the analysis shown in Table 51 and Table 52) has been transformed into three categories for respectively cases with decrease in operational costs, no change in operational costs and increase in operational costs from the last procurement round.

Table 53.

Distribution of cost effects from last procurement round of park and road services between municipalities with high and low levels of formalized transactional contractual framework (TCF).

Cost effect ^a	Level of formalized transactional contract framework (TCF) ^b				
	Higher level of TCF Count: observed (expected)		Lower level of TCF Count: observed (expected)		Total
Decrease	28	(21.8)	8	(14.2)	36
No change	20	(24.2)	20	(15.8)	40
Increase	1	(3.0)	4	(2.0)	5
Total	49		32		81

^a Variable based on transformation to categorical data of self-reported estimates on cost effects from last round of procurement of park and road maintenance services

^b Groups based on median value for formalized transactional contractual framework for all cases in the dataset with valid entries (median value = 7.5).

Test statistics for relationship between variables (2 cells has an expected count < 5, minimum expected count = 1.98): Fisher's exact test: 9.619, p = .006 (two-sided). Cramer's V = .347. Similar results are found by chi-test.

Test statistics (Fisher's exact test, $p < .01$) of the relationship between the cases with higher and lower level of TCF and cost effects shown in Table 53 confirm the findings from the analysis shown in Table 51. The measurement of the size of the effect between the two variables is considerable (Cramer's $V = .347$). Similarly, test statistics (Fisher's exact test) of the relationship between the cases with higher and lower level of RCF and cost effects shown in Table 54 confirm the findings from the analysis shown in Table 52. No statistically significant correlation ($p = .166$) is found between cost effects and the level of RCF. Furthermore, an additional analysis based on categorical data for parks alone (not show) also finds no statistically significant correlation (as might be expected from visual inspection of the difference in average cost effects for parks shown in Table 52).

Table 54.

Distribution of cost effects from last procurement round of park and road services between municipalities with high and low levels of formalized relational contract framework (RCF).

Cost effect ^a	Level of formalized relational contract framework (RCF) ^b				Total
	Higher level of RCF Count: observed (expected)		Lower level of RCF Count: observed (expected)		
Decrease	28	(24.7)	9	(12.3)	37
No change	22	(26.0)	17	(13.0)	39
Increase	4	(3.3)	1	(1.7)	5
Total	54		27		81

^a Variable based on transformation to categorical data of self-reported estimates on cost from last round of procurement of park and road maintenance services.

^b Groups based on median value for formalized relational contractual framework for all cases in the dataset with valid entries (median value = 4.5).

Test statistics for relationship between variables (2 cells has an expected count < 5, minimum expected count = 1.67): Fisher's exact test: 3.415, $p = .166$ (two-sided). Cramer's $V = .211$. Similar results are found by chi-test.

7.3.4 Importance of economic size of private sector involvement

This section provides an analysis of the bivariate relation between cost effects and economic size of overall private contractor involvement. The analysis builds on the assumption that private contractors can provide better economy of scale if the economic size of services contracted out is larger. The analysis only use cases with valid values for both variables, i.e. 'cost effects' and 'economic size of overall private sector involvement' (N=79).

The figures for overall private contractor involvement are calculated from two survey items (reported figures for total operational budgets of the department and the percentage of total operational budget spend on private contractors). Figures for overall private contractor involvement has been calculated separately for parks, roads and park and roads combined. The municipalities

have subsequently been divided into two groups based on the median values for economic size of overall private contractor involvement. The two groups have respectively larger and smaller size of economic involvement in absolute monetary terms. The average budget for park operations spend on private contractors for the groups with smaller economic involvement is, for example, estimated to be 1.5 Mill. DKK (based on the 34 cases with valid estimates for both economic size and cost effects). The average figures cover large underlying variations among the municipalities as well as a general 'skewness' due to a few municipalities with very large involvements of private contractors measured in absolute economic terms.

Table 55.

Differences in cost effects from last procurement between departments with larger and smaller absolute economic size of private sector involvement.

Cost effect ^{a b}	Mean scores ^c		Difference ^d	ETA SQ
	Larger size of economic involvement	Smaller size of economic involvement		
Cost effect, roads (N=45)	-7.7 %	-0.7 %	7.0 *	.107
<i>Average size of economic involvement, roads (N=45)</i>	<i>34.3 Mill. DKK</i>	<i>10.3 Mill. DKK</i>	<i>20.0 **</i>	<i>.557</i>
<i>Level of contracting out, roads (N=45)</i>	<i>59.7 %</i>	<i>40.4 %</i>	<i>19.3 *</i>	<i>.094</i>
Cost effect, parks (N=34)	-7.1 %	-0.1 %	7.0 [†] (p = .062)	.105
<i>Average size of economic involvement, parks (N=34)</i>	<i>7.3 Mill. DKK</i>	<i>1.5 Mill. DKK</i>	<i>6.8 *</i>	<i>.186</i>
<i>Level of contracting out, parks (N=34)</i>	<i>55.0 %</i>	<i>17.5 %</i>	<i>37.5 **</i>	<i>.302</i>
Cost effect, parks AND roads (N=79)	-6.6 %	-2.7 %	3.9 [†] (p = .086)	.038
<i>Average size of economic involvement, parks AND roads (N=79)</i>	<i>26.9 Mill. DKK</i>	<i>3.6 Mill. DKK</i>	<i>23.3 **</i>	<i>.524</i>
<i>Level of contracting out, parks AND roads (N=79)</i>	<i>58.6 %</i>	<i>35.2 %</i>	<i>23.4 **</i>	<i>.158</i>

Source: INOPS survey data

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Findings for cost differences are congruent with analysis of the bivariate correlations between continuous data for cost change and economic size (transformed to logarithmic values). Pearson's correlation coefficients and significance levels for bivariate relations: parks = -.394*, roads = -.376*, parks and roads combined = -.243*

^c Size of economic involvement calculated from survey items on the percentage of the departments operational budgets allocates to private contractors and the total value of the department's operational budgets. Groups ('larger' and 'smaller') are based on median value for size of economic involvement of private contractors for respectively parks, roads and parks and roads combined (median value for parks = 3.475 Mill. DKK, roads = 20.0 Mill. DKK, parks and roads combined = 6.6 Mill. DKK).

^d Differences evaluated at significance levels (SPSS ANOVA): [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

The analysis of the importance of economic size of overall economic involvement and cost effects is shown in Table 55. Overall the analysis shows significant differences between the groups with larger and smaller size of economic involvement and the cost effects for parks, roads as well as park and roads combined. The difference is found to be stronger for respectively roads and parks and weaker for parks and roads combined. The weak difference for parks and roads combined can be explained by the absolute difference in the size of economic involvement between the two sectors. For example, the average economic size of involvement for the group with smaller size of economic involvement for the road sector is larger (10.3 mill. DKK) than the average economic size of

involvement for the group with larger size of economic involvement in the park sector (7.3 mill. DKK). This finding indicates that the importance of economic size cannot be compared directly between the two areas by using absolute figures (a parallel to the ‘frog-pond’ effect known from social comparison theory). An additional bivariate analysis of correlations based on continuous data⁶¹ supports the conclusions that can be drawn from the analysis shown in Table 55. The results from this analysis are (Pearson’s and value for significance): parks = $-.394$ (.021), roads = $-.376$ (.024), parks and roads combined = $-.243$ (.031). All correlations are found significant at p -level $< .05$.

An alternative analysis based on calculations of the size of economic involvement of private contractors for the whole municipality within the park and road sector (and not estimates for the department alone as in the analysis above) shows weak or no significant results (analysis not shown).⁶² This difference in findings may indicate that either should the findings in the analysis above be interpreted carefully, the contracts and measurements are not optimal for the analysis, or the difference in the distribution of budgets at the department compared to the municipal level is important due to an unknown factor (e.g. many municipal institutions, such as schools, has separate management and budget for outdoor facilities).

Greater economic size of private sector involvement at the department level may be important due to increased capacity to organise and bundle services more effectively for procurement in the market. It may also indicate a greater capacity and experience at the department level with public procurement and contracting out. The last suggestion is supported by the finding that the group with a larger economic involvement of private contractors also relies to a greater extent on formalized and more complex contract frameworks than the group with smaller economic involvement (analysis shown in earlier chapter). Contractors on the other hand should be able to provide greater economies of scale (and lower pricing of services) if the economic size of the involvement in particular engagements are larger.

⁶¹ The analysis is based on transformed logarithmic values due to strong right skewness in the underlying data, e.g. some municipalities have disproportionately large budgets.

⁶² Calculations of operational costs at the municipal level were based on available data from national municipal accounts for year 2014 (Statistics Denmark). In general figures for the average operational budget spend on private contractors for park and road maintenance at the municipal level (approx. 33.9 mil. DKK) were found higher than the estimates for the department level (approx. 28.2 mil. DKK).

7.3.5 Cost savings and satisfaction with quality

Table 56 and Table 57 show two different analysis of the (bivariate) association between cost effects from the last round of procurement and the self-evaluated satisfaction with the maintenance quality delivered by private contractors. Both analyses indicate no bivariate association for respectively parks, roads as well as parks and roads.

Table 56 shows an analysis of differences in cost change between municipalities with higher and lower satisfaction levels with the maintenance quality of delivered by private contractors. The individual analysis of respective parks and roads shows that there are no bivariate association between satisfaction with maintenance quality and cost savings. The analysis of parks and roads combined shows the same result.

Table 56.

Differences in cost effects between municipalities with higher and lower levels of satisfaction with quality of services delivered by private contractors.

Cost effects ^a	Mean scores for satisfaction with quality ^b		Score difference ^d	ETA SQ
	Higher satisfaction ^c	Lower satisfaction ^c		
Cost effect, roads (N =45)	-6.7 %	-4.6 %	2.1 ^{ns}	.008
Cost effect, parks (N=34)	-4.8 %	-5.7 %	0.9 ^{ns}	.002
Cost effect, parks AND roads (N=79)	-5.6%	-5.1%	0.5 ^{ns}	.002
Satisfaction with quality, roads (N=62)	8.5	6.0	2.5 ^{**}	.578
Satisfaction with quality, parks (N=53)	8.4	5.6	2.8 ^{**}	.648
Level of contracting out, roads (N=61)	54.3 %	41.6 %	12.7 [†]	.063
Level of contracting out, parks (N=53)	33.5 %	35.2 %	2.3 ^{ns}	.001

Source: INOPS survey data

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Based on a bipolar 11-point response scale with end anchors, where 0 = 'very unsatisfied', 10 = 'very satisfied'.

^c Groups based on median value for satisfaction with quality (median value for parks = 8, roads = 8).

^d Score differences evaluated at significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant.

Table 57 shows an analysis of differences in average satisfaction levels between groups which experienced respectively a decrease, no change or an increase in cost levels from the last round of procurement. The analyses of roads, parks and roads and parks combined find no statistical significant differences (p > .1).

The statistics provided in Table 57 also shows that cases which experienced a decrease in cost levels contract out a larger share of their services (measured by the percentage). The differences in contracting levels are statistically significant (p < .1) for parks, roads as well as parks and roads combined. The difference in contracting levels between the groups with different cost effects is strongest for parks alone (ETA SQ = .183 / Linear R SQ = .133).

Table 57.

Differences in satisfaction with quality of park and road maintenance services delivered by private contractors between municipalities with different cost effects from last round of procurement.

Quality ^a	Cost effect ^b			ETA SQ ^c	Linear R SQ ^c
	Decrease (saving)	No effect	Increase		
Satisfaction with quality, roads (N=44)	7.7	7.5	7.7	.008 ^{ns}	.002 ^{ns}
Satisfaction with quality, parks (N=35)	7.3	7.0	7.5	.010 ^{ns}	.002 ^{ns}
Satisfaction with quality, parks AND roads (N=79)	7.5	7.3	7.6	.006 ^{ns}	.002 ^{ns}
Level of contracting out, roads (N=47)	62.9 %	46.3 %	51.7 %	.106 [†]	.076 [†]
Level of contracting out, parks (N=36)	60.0 %	29.6 %	40.0 %	.183 *	.133 *
Level of contracting out, parks AND roads (83)	61.4 %	38.8 %	47.0 %	.137 **	.097 **

Source: INOPS survey data

^a Based on a bipolar 11-point response scale with end anchors, where 0 = 'very unsatisfied', 10 = 'very satisfied'.

^b Based on categorical data.

^c Significance levels: [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant.

7.4 Explanatory analysis of cost effects

The following section provides an explanatory analysis of cost effects from contracting out park and road maintenance in Danish municipalities.⁶³ The analysis is based on an OLS regression analysis and evaluates the importance of sector, contracting purpose, procurement history, contractual framework and satisfaction with quality for the size of cost effects (based on continuous data). Table 58 provides a summary of descriptive statistics for cases (N = 76) included in the explanatory analysis.

Table 58.
Explaining cost effects in Denmark: Descriptive statistics for variables used in OLS regression.

Variable	Descriptives ^a			
	Scale	Mean	Std. Deviation	Min–Max value
Cost effect from last procurement (pct. change) ^b	%	- 5.0 %	9.9 %	-.40 – .16
Sector (binary, park=0, roads=1)	0 – 1	.55	.50	0 – 1
Procurement history (number of past procurements)	1 – 4	3.1	1.2	1 – 4
Purpose for contracting out: cost reduction ^c	0 – 10	7.5	2.0	0 – 10
Transactional contract dimensions (index) ^c	0 – 10	7.6	2.0	2.0 – 10.0
Relational contract dimensions (index) ^c	0 – 10	5.1	2.1	.8 – 10.0
Satisfaction with maintenance quality ^d	0 – 10	7.4	1.7	2 – 10

^a All descriptives are calculated from the number of cases included in the OLS regression analysis (N=76).

^b Based on self-reported figures for cost changes from last public procurement of park and road services. Negative signs indicate cost savings.

^c Based on a unipolar 11-point response scale with anchors: 0 = 'not at all', 10 = 'in very high degree'

^d Based on a bipolar 11-point response scale with end anchors, where 0 = 'very unsatisfied', 10 = 'very satisfied'.

The analysis, based on an OLS regression analysis, of the importance of various explanatory variables for cost effects is shown in Table 59. The analysis shows that three out of the six explanatory variables help explain differences in cost effects. The statistic for R^2 in the model shows that the explanatory variables account for around 20 percent of the variance in the dependent variable (size of cost effects).

Sector (park or road), the level of relational contract framework and managers' satisfaction with service quality are all insignificantly correlated with the size of cost effects ($p > .1$). In other words, the regression analysis shows that cost effects are alike in the two sectors, the level of relational contract framework is unimportant for cost effects as well as the level of satisfaction with service quality is unaffected by the size of the cost effect.

Three variables are found important for explaining differences in cost effects: procurement history, contracting purpose and the level of transactional contract framework. The analysis shows

⁶³ The section is based on an analysis of cost effects from contracting out of park and road maintenance based on INOPS survey data presented in Lindholst, Petersen & Houlberg (2015).

that a higher number procurement rounds in the past within the particular sector is associated with a diminishing level of cost reduction. The beta-coefficient for procurement history (+.029) indicates that in the range from 1 to 4 past procurement rounds the level of cost reduction is reduced with around 3 percent points on the average each subsequent time a service is procured.

Table 59.

Explaining cost effects from contracting out park and road maintenance in Denmark: OLS Regression.

Explanatory variables (scales)	Unstandardized beta-coefficients (standard errors) ^a
Sector (roads=1, parks=0)	÷ .009 ^{ns} (.021)
Procurement history (1-4)	+ .029^{**} (.010)
Purpose: Low maintenance cost (0-10)	÷ .011[*] (.005)
Transactional contract framework (0-10)	÷ .012[†] (.006)
Relational contract framework (0-10)	+ .007 ^{ns} (.006)
Satisfaction with service quality (0-10)	+ .001 ^{ns} (.007)
N	76
Max VIF	1.676
R ² / Adjusted R ² ^b	.264 / .200

Data sources: INOPS survey

Legend: Beta-coefficients in bold indicate a statistical significant correlation. Negative sign (÷) indicates a cost decrease. Positive sign (+) indicates a cost increase. Significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant. Diagnosis for outliers (cases with std. residuals >= 3.00). One influential outlier detected and removed.

^a Coefficients indicate the level of change in the dependent variable (.01 = 1 %) by changing one scale unit in an explanatory variable.

^b R² = the degree (ranging from 0 to 1) in which the 'explanatory' variables account for the variance in the dependent variable.

The degree a municipality puts emphasis on 'low maintenance cost' as contracting purpose also helps explain differences in cost effects. The beta-coefficient for 'low maintenance cost' as contracting purpose (÷ .011) indicate that a one-point increase (e.g. from 6 to 7) in the score (ranging from 0 to 10) is associated with a cost reduction around 1 percent. This finding indicates that municipalities are able to use public procurement and contracting out as a deliberate strategy for reducing operational costs within the park and road sector. This finding also indicates that it is not always relevant to evaluate the success of contracting out by its effect on cost levels alone as cost reductions not always are the primary purpose for contracting out.

Furthermore, higher levels of transactional contract framework are also indicated to be associated with larger cost reductions. The beta-coefficient for transactional contract framework (÷ .012) indicates that a one-point increase in the score is associated with a cost reduction around 1 percent. This finding indicates that the features associated with a transactional contract framework are important for the level of operational costs when park and road services are contracted out. These features include the degree the services in question are specified, the degree of specification of formal agreements as well as the degree 'hard' safeguards (i.e. economic sanctions in case of non-compliance) are specified in the contract. Overall, the regression analysis finds that higher

degrees of specification of these features are associated with a higher degree of cost reduction when services are contracted out.

Overall, the findings in the OLS regression analysis shown in Table 59 confirms key findings from the bivariate analyses of the relations between cost effects and the variables used for explaining differences in cost effects.

7.4.1.1 *Alternative analysis*

An additional analysis (not shown) which includes an additional explanatory variable for the size of economic involvement (based on the assumption on greater returns from scale economic when the economic value of services contracted out are greater) also indicates that a larger economic size of the overall involvement of private contractors at the department level compared to a smaller economic size is significantly correlated with cost savings.⁶⁴ The significance levels and signs for the explanatory variables included in the analysis shown in Table 59 remains approximately the same except for TFC which becomes insignificant ($p = .152$) while the unstandardized beta-coefficient becomes smaller (change from $-.012$ to $-.007$). The changes in the estimates for TCF can be argued to be produced by an association between economic size and contractual framework (i.e. more encompassing formal contract frameworks are used for contracts or larger economic size).

⁶⁴ The included construct for measurement of economic size is based on a binary variable coded as either higher (=1) or lower (=0). The coding is based on groups defined by either a higher or lower value for median values for respectively park and road budgets separately (roads = 19.0 mil. DKK, parks = 3.475 mil. DKK). The coding is separate for the two sectors in order to avoid eventual 'frog pond' effects (which would be the case if the coding was based on the median value for park and road budgets combined). Model summary: $N=74$ (three influential outliers removed), $R^2 / \text{Adj. } R^2 = .421 / .360$, $\text{MAX VIF} = 1.717$. Unstandardized beta-coefficient for economic size = $-.048$, $p\text{-level} < .01$.

7.5 Comparing cost effects across Denmark, Sweden, Norway and UK

This section provides comparisons of cost effects on operational cost from contracting out park and road maintenance services in municipalities across Denmark, Sweden, Norway and UK. The comparisons are based on partly similar survey data for all countries. In particular, for UK the survey included different response options for cost effects.⁶⁵ The survey data allows for comparisons of cost effects based on continuous data for all Scandinavian countries and for comparisons of cost effects based on categorical data for all four countries.

7.5.1 Cross national comparison of size and direction of cost effects

Table 60 provides comparable statistics for the average (un-weighted) cost effects from contracting out parks and road services in Denmark, Norway and Sweden. The averages were calculated from all cases for roads and parks where estimates were provided in the national surveys. The comparison shows that cost decreases (i.e. savings) has on the average been achieved in Denmark (-5.5 %) and Sweden (-2.7 %) while contracting out has entailed cost increases in Norway (11 %). Furthermore, the variations, measured by the standard deviation, between the cases in both Sweden and in particular Norway are higher than in Denmark. The range between the 'extreme' values is also higher for Norway (140 percentage points) and Sweden (120 percentage points) than for Denmark (66 percentage points).

Table 60.

Nordic countries: Comparisons of average cost effects from last procurement of park and road maintenance services.

	Parks and Roads – Cost effects		
	Denmark	Norway	Sweden
N	82	52	78
Mean (un-weighted)	- 5.5 %	11.0 %	- 2.7 %
Std. dev.	10.8 %	24.5 %	14.0 %
Min. value (decrease)	- 50 %	- 40 %	- 70 %
Max. value (increase)	16 %	100 %	50 %

All data based on valid cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price and cost level for services contracted out after the last round of procurement. No survey data on estimates for cost effects in percentage available for UK.

⁶⁵ The research team for the UK survey as well as pilot tests evaluated the most appropriate response option to be a categorical format (i.e. 'increase', 'decrease') whereas the research teams for the three Scandinavian countries evaluated a continuous response format to be able to provide valid information. In addition, the UK format included additional survey items on the effect for quality.

Table 61 provides a cross national comparison of cost effects based on categorical data. Across all four countries 119 out of 278 municipalities – equal to 43 % – experienced a cost decrease the last time a park or road maintenance services was procured while 38 % experienced no cost change and 19 % experienced a cost increase. Respondents in a relatively large portion of the municipalities also indicated that they didn't know the cost effect. In the three Scandinavian countries the portion which indicates a 'don't know' is in the range between 22 % (Norway) and 39 % (Sweden). The portion for UK is around 13 %. The difference for UK in comparison with the three Scandinavian countries may also reflect difference in the response options for the survey items.⁶⁶

Table 61.

Cross national comparison of cost effects from last procurement of park and road maintenance services.

	Cost effects				
	Denmark (cases)	Norway (cases)	Sweden (cases)	UK (cases)	All Countries (cases)
N (valid answers with estimates)	82	52	78	66	278
Cost increase	5	28	15	5	53
No cost change	40	18	38	10	106
Cost decrease	37	6	25	51	119
Don't know	27	15	30	9	81
N (total)	109	67	108	75	359

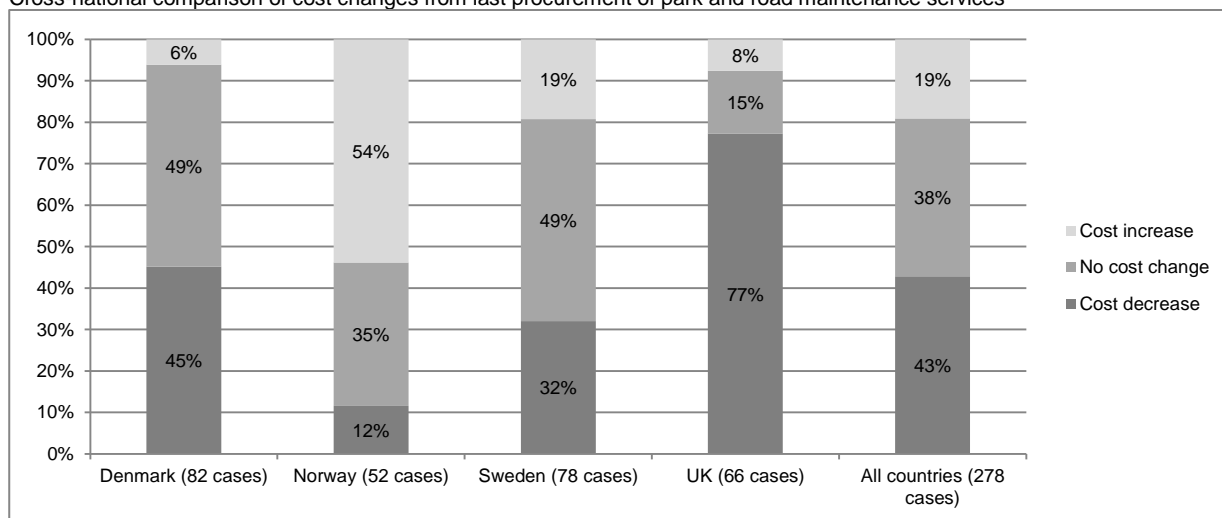
All data based on cases with self-reported effects.

However, as also shown in Figure 27 below, the differences between the countries are notable. Sweden and Denmark are the two countries most alike, while Norway and UK represent the two extremes. Norway is the country with the largest portion of municipalities which have experienced a cost increase (54 %) while UK is the country with the largest portion of municipalities which have experienced a cost decrease (77%).

⁶⁶ The portion of 'don't knows' is smaller in UK than in the three other countries, but this may reflect the different and less demanding response option for cost effects (categories for direction of cost change versus the percentage for change in ex ante operational cost compared to ex post costs) in the survey.

Figure 27.

Cross-national comparison of cost changes from last procurement of park and road maintenance services



7.5.2 Explaining cost difference in Sweden, Norway and UK

7.5.2.1 Explaining cost differences in Norway

The analysis of the Norwegian context shows that Norway is characterized by a high number of very small municipalities distributed over a vast geographical area. The use of contracting out in Norwegian municipalities has furthermore only been promoted weakly by central government policies in Norway. The INOPS survey data also shows that the main reason for using private contractors in Norway is for provision of maintenance services which cannot be provided in-house – and less for the purpose of lowering cost of park and road maintenance. The variation in the emphasis on low maintenance cost as purpose for contracting out varies to a great extent among Norwegian municipalities. On a scale from 0 (not at all) to 10 (very high degree) the Norwegian municipalities on the average scores the importance of low maintenance cost as purpose for using private contractors a little above the scale midpoint (5.8) while the standard deviation is as high as 3.1 (also see chapter on reasons for using private contractors).

Overall, the survey data shows that the most common scenario is a cost increase when Norwegian municipalities contract out parks and road maintenance. Table 62 shows the distribution of cost effects in terms of whether a ‘cost decrease’, ‘no cost change’ or a ‘cost increase’ was reported from the last round of procurement of park and road maintenance. Five cases of cost decrease out of 39 cases (equal to 13 %) were reported for road maintenance. Only 1 case indicated

a ‘cost decrease’ out of the 13 cases (equal to 8 %) which was reported for park maintenance. Twenty-eight out of the 52 cases (equal to 54 %) experienced a cost increase.

Table 62.
Cost effects in Norwegian municipalities from last round of procurement of park and road services

Cost effect ^a	Sector		Total
	Park	Road	
Decrease	1	5	6
No change	5	13	18
Increase	7	21	28
Total	13	39	52

^a Variable based on transformation to categorical data of self-reported estimates on cost from last round of procurement of park and road maintenance services.

However, as indicated by the statistics on variations (see Table 60), some Norwegian municipalities are able to achieve relatively better and more satisfactory economic outcomes than others. A bivariate analysis of the association between low maintenance costs as the strategic purpose for contracting out and the cost change from last procurement shows that contracting purpose are important for predicting the economic outcome. Table 63 shows an analysis of differences in cost effects between groups with respectively ‘higher’ and ‘lower’ emphasis on low maintenance cost as contracting purpose.

Table 63.
Differences in cost effects between Norwegian municipalities with higher and lower emphasis on low maintenance cost as contracting purpose.

Cost effects ^a	Mean ^b		Score difference ^d	ETA SQ
	Higher emphasis ^c	Lower emphasis ^c		
Cost effect, roads (N =36)	3.9 %	21.9 %	18.0 *	.151
Cost effect, parks (N=12)	3.3 %	41.7 %	38.4 †	.293
Cost effect, parks AND roads (N=48)	3.7 %	25.0 %	21.3 **	.171
Contracting purpose: low maintenance costs (N=136)	8.3	3.2	5.1 **	.706
Satisfaction with cost levels, parks AND roads (N=86)	6.5	5.9	.6 ^{ns} (p = .134)	.026
Level of competition (N=112)	6.2	5.3	.9 †	.025
Level of contracting out, parks and roads (N=112)	43.6 %	27.8 %	12.7 **	.066

Source: INOPS survey data for Norway

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Groups based on median value for contracting purpose: low maintenance costs (median value = 6). Item for contracting purpose is based on a unipolar 11-point response scale with end anchors, where 0 = ‘not at all’, 10 = ‘very high degree’.

^c Score differences evaluated at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

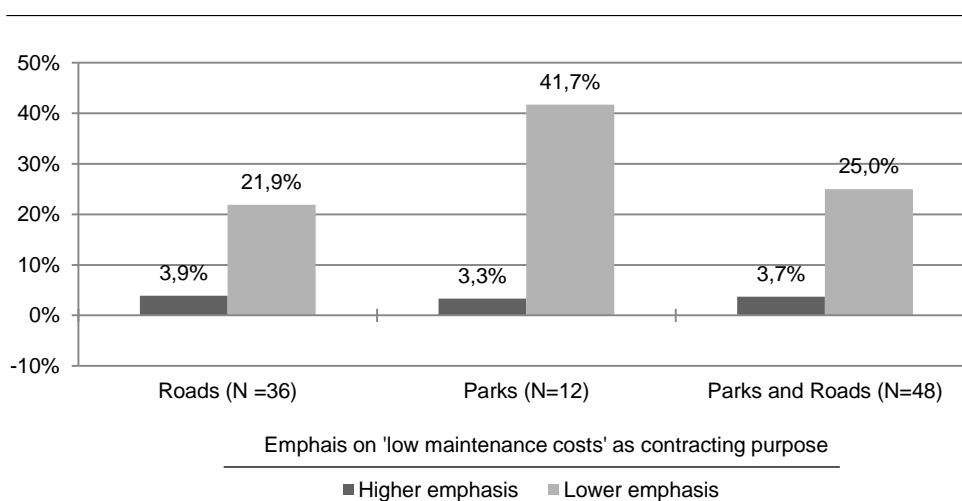
The difference in the emphasis on low maintenance cost as contracting purpose between the groups with higher and lower emphasis is very high. Within the group with higher emphasis the mean score is 8.3 while the mean score the group with lower emphasis is 3.2. The difference in the cost effect

between the two groups is statistically significant for both parks and roads alone as well as for parks and roads combined. For parks and roads combined, the difference is 21.3 percentage points. The difference is higher for parks alone (38.4 percentage points) and smaller for roads alone (18.0 percentage points). Analysis of the bivariate association between the two variables based on correlational analysis for parks and roads combined produce similar results (Pearson's $r = -.435$, $p < .01$). Furthermore, the satisfaction with economic performance is not significantly lower for municipalities with a lower emphasis on low maintenance cost compared to municipalities with a higher emphasis on low maintenance costs. To some extent it is also found that those municipalities which pursue a low cost contracting strategy also experience a higher level of competition.

The short analysis of bivariate associations indicates that although economic results in terms of cost savings from contracting out among Norwegian seems very poor, some municipalities still pursues a low cost strategy relatively successfully. Figure 29 vividly illustrates the difference. It should be noted however, that none of the groups (e.g. municipalities with higher emphasis on low maintenance costs as contracting purpose) has experienced a cost decrease on the average. For example, the average change in operational costs from last procurement for parks and roads combined (N=48) is a 3.7 % increase. The finding in Norway (regarding the importance of the low maintenance cost strategy) is similar to the finding in the more elaborate explanatory analysis of contracting out among Danish municipalities.

Figure 28.

Cost effects (percentage change in operational costs) from procurement of park and road maintenance in Norwegian municipalities with higher and lower emphasis on 'low maintenance cost' as purpose for contracting out.



A more detailed statistical analysis based on OLS regression analysis of explanatory factors for cost effects is shown in Table 64. The analysis investigates the importance of sector (park or road), municipal size (inhabitants), level of competition, procurement history, and low cost contracting strategy.

Table 64.

Explaining cost effects from contracting out park and road maintenance in Norway: OLS Regression.

Predictor variables (scales)	Unstandardized beta-coefficients (standard errors)				
	Model 1	Model 2	Model 3	Model 4	Model 5
Sector (roads=1, parks=0)	-0.047 ^{ns} (.079)	-0.059 ^{ns} (.076)	-0.056 ^{ns} (.074)	-0.069 ^{ns} (.071)	- -
Municipal size (LN)	-0.012 ^{ns} (.024)	-0.008 ^{ns} (.024)	-0.001 ^{ns} (.023)	.008 ^{ns} (.023)	- -
Level of competition (0-10)	- -	-0.020[†] (.010)	-0.013 ^{ns} (.011)	-0.007 ^{ns} (.011)	-0.006 ^{ns} (.011)
Procurement history (1-4)	- -	- -	-0.068[†] (.038)	-0.066[†] (.036)	-0.063[†] (.035)
Purpose: Low maintenance cost (0-10)	- -	- -	- -	-0.026[*] (.011)	-0.024[*] (.011)
N	47	47	47	47	47
Max VIF	1.089	1.121	1.193	1.272	1.268
R ² / Adj. R ²	.010 / -.035	.093 / .029	.157 / .077	.253 / .162	.229 / .175

Significance levels: [†] p < .1, * p < .05, ** p < .01, ^{ns} = non-significant.

One influential outlier removed (std. residual > 3.0) in all models.

The analysis finds that higher levels of experienced competition, a higher number of public procurements in the past as well as greater emphasis on a low cost contracting strategy are associated with relatively better economic outcomes in terms of the change in operational cost smaller cost increases (or a degree of cost savings). No difference in cost effects is found between the park and road sectors as well as municipal size is found to be unimportant (insignificant).

The Norwegian case represents an ‘inverted’ case of the hypothesis of ‘Diminishing returns of competition’. The hypothesis states that benefits will tend to diminish from the introduction of additional competition in situations already characterized by a degree of competition (Boyne, 1998). The analysis in Table 64 shows that a variant of the ‘diminishing return of competition effect’ is in play in the Norwegian context of contracting out. However, the effect works somehow differently than originally formulated (i.e. cost savings / gains becomes smaller by introduction of additional competition). Table 65 provides a simple overview of the cost effect for groups of municipalities with different procurements histories (i.e. number of public procurements in the past ten years). It is found that while it on the average seems costly to contract out park and road maintenance for the first time for the Norwegian municipalities the ‘additional’ cost from procurement it also decreasing over time (i.e. by an increasing number of procurements). In addition, the percentage of

municipalities which do not experience a cost change increases over time (i.e. by an increasing number of procurements). In other words, the ‘diminishing return from competition effect’ in Norway works as a ‘diminishing loss from competition effect’.

Table 65.

Cost effects distributed according to the number of public procurements in the past ten years in Norwegian municipalities.

Number of procurements in the past ten years	Mean cost effect ^a	S.D.	Percentage which experienced:			N
			a cost decrease	No change	a cost Increase	
One	+ 45.0 %	48.2	0 %	0 %	100 %	3
Two	+ 5.7 %	16.9	14 %	15 %	71 %	7
Three	+ 17.5 %	28.6	16 %	21 %	63 %	19
Four or more	+ 2.8 %	13.7	9 %	66 %	35 %	23
<i>All cases</i>	+ 10.3 %	22.1	33 %	48 %	19 %	52

^a The linear association between the four categories is significant, p -level = .018. R^2 = .101. Deviation from linearity is also significant at p = .077.

Another important finding in the OLS-regression analysis is the ‘interaction effect’ between competition level and procurement history. The significant correlation between cost effect and competition level in model 2 turns insignificant in model 3 by the inclusion of procurement history in the model. Technically, procurement history acts as a (partial) ‘mediator’ variable. The finding can be interpreted in the overall context of contracting out among Norwegian municipalities. In particular, use of contracting out and the markets for provision of park and road maintenance in Norway is not well-developed and uneven distributed across the country. Norwegian municipalities do not ‘tap’ directly into well-established and competitive markets when they chose to contracting out or not, but rather they seem to create markets and competition through recurrent use of procurement.

Table 66.

Norway: Average level of experienced competition distributed according to the number of public procurements in the past ten years.

Number of procurements in the past ten years	Mean	N	S.D.
One	2.7	3	1.5
Two	4.1	7	2.4
Three	5.8	17	3.4
Four or more	6.7	20	2.9
<i>Total</i>	5.8	47	3.1

The linear association between the four categories is significant, p -level = .011. R^2 = .139.

The analysis provided in Table 66 illustrates this interpretation. The analysis shows that the level of experienced competition as a general trend increases with the number of public procurements in the

past ten years. Norwegian municipalities have not readily ‘tapped’ directly into a competitive market, but have created this by the use of public procurement. The development of contracting out and competitive markets seems to come at a ‘cost’ in terms of rather poor economic results at an initial stage (e.g. increased operational costs).

The initial lack of markets and the ‘inversed’ effect in Norway can be contrasted to the situation in Denmark. Denmark has more ‘matured’ and evenly distributed markets for road and park maintenance services. The contrast between Denmark and Norway also illustrates the importance of context.

7.5.2.2 Explaining cost differences in Sweden

The data for cost effects from contracting out of park and road maintenance in Swedish municipalities shows that about one-third has experienced a cost decrease from the last procurement round while about one half experienced no cost change (see Figure 27). An analysis by Bretzner et al (forthcoming) based on INOPS survey data finds that contracting out is more ‘rational’ in city-regions with well-developed markets.

Table 67 shows a bivariate analysis of differences in cost effects between municipalities which experience respectively higher and lower levels of competition (last time they procured maintenance services). The analysis shows that the group of municipalities which experienced higher levels of competition on the average has achieved a cost decrease for parks (-3.8 %), roads (-7.6 %) and parks and roads combined (-6.0 %). On the other hand the group of municipalities which experienced lower levels of competition on the average has achieved a cost increase for parks (3.1 %), roads (-6.5 %) and parks and roads combined (-5.5 %).

Table 67.
Differences in cost effects between Swedish municipalities with higher and lower levels of competition.

Cost effects ^a	Means ^b		Score difference ^d	ETA SQ
	Higher level ^c	Lower level ^c		
Cost effect, roads (N=47)	- 7.6 %	6.5 %	14.1 **	.181
Cost effect, parks (N=29)	- 3.8 %	3.1 %	6.9 ^{ns} (p=.186)	.064
Cost effect, parks and roads (N=76)	- 6.0 %	5.5 %	11.5 **	.135
Level of competition (N=136)	8.3	3.7	4.6 **	.754
Satisfaction with cost levels, parks and roads (N=104)	6.9	5.5	1.4 **	.086
Level of contracting out, parks and roads (N=112)	53.6 %	38.4 %	15.2 *	.041

Source: INOPS survey data for Sweden

^a Data for cost effects based on cases with self-reported estimates. Respondents were asked to provide estimates on the effect on the total price / cost level for services contracted out after the last round of procurement. Negative values indicate a cost decrease (i.e. cost saving).

^b Groups based on median value for level of competition (median value = 7). Item is based on a unipolar 11-point response scale with end anchors, where 0 = ‘not at all’, 10 = ‘very high degree’.

^c Score differences evaluated at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

Analysis of the bivariate association between the two variables based on correlational analysis for parks and roads combined produce similar results (Pearson's $r = -.399$, $p < .01$). Furthermore, Table 67 includes an analysis which shows that the satisfaction with cost levels is significantly higher for Swedish municipalities which experienced higher levels of competition compared to municipalities which experienced lower levels of competition.

Table 68.
Average cost effects distributed according to geographical region in Sweden.

Region	Mean cost effect	S.D.	N
Northern	+ 1.5 %	10.4	25
Eastern	- 8.4 %	17.4	22
Southern	- 2.0 %	13.1	31
<i>All of Sweden</i>	- 2.7 %	14.1	78

Differences between regions are statistically significant, $p = .051$. ETA squared = .076.

Table 68 shows an analysis of average cost effects for three regions in Sweden. The Northern part, which is the least densely populated part of Sweden and with smaller sized municipalities, is found to have experienced a minor increase in operational costs on the average (+ 1.5 %) from the last round of procurement of park or road maintenance services. In contrast, municipalities in the Eastern part of Sweden have experienced a substantial cost decrease on operational costs (-8.4 %) while the Southern part has experienced a smaller cost decrease (- 2.0 %).

Table 69.
Explaining cost effects from contracting out park and road maintenance in Sweden: OLS Regression.

Predictor variables (scales)	Unstandardized beta-coefficients (standard errors)									
	Model 1		Model 2		Model 3		Model 4		Model 5	
Sector (roads=1, parks=0)	-0.11 ^{ns}	(.037)	-0.024 ^{ns}	(.034)	-0.019 ^{ns}	(.034)	-0.021 ^{ns}	(.034)	-	-
Municipal size (LN)	.001 ^{ns}	(.017)	.003 ^{ns}	(.016)	.006 ^{ns}	(.016)	.004 ^{ns}	(.016)	-	-
Northern Sweden (yes=1, no=0)	.063 ^{ns} ($p=.125$)	(.040)	.076 *	(.037)	.077 *	(.037)	.075 *	(.037)	.070 †	(.036)
Level of competition (0-10)	-	-	-.025 **	(.007)	-.024 **	(.007)	-.025 **	(.007)	-.024 **	(.006)
Procurement history (1-4)	-	-	-	-	-0.017 ^{ns}	(.018)	-0.020 ^{ns}	(.018)	-0.021 ^{ns}	(.018)
Purpose: Low maintenance cost (0-10)	-	-	-	-	-	-	-0.007 ^{ns}	(.008)	-0.007 ^{ns}	(.008)
N	69		69		69		69		69	
Max VIF	1.070		1.080		1.084		1.086		1.041	
R ² / Adj. R ²	.037 / -.007		.209 / .160		.220 / .159		.230 / .155		.224 / .176	

Significance levels: † $p < .1$, * $p < .05$, ** $p < .01$, ^{ns} = non-significant.

A fuller analysis, based on hierarchical OLS regression analysis, is shown in Table 69. The analysis includes six altogether predictor variables which are included stepwise in model 1-4. Model 5 includes four predictor variables. The analysis confirms the findings on the importance of region and competition for cost effects. Higher levels of competition are significantly correlated with higher levels of cost savings. The location in Northern Sweden only becomes significantly correlated (at a p-level < .1) with cost savings when the level of competition is included in the analysis (model 2-5).

The analysis also shows that procurement history and emphasis on a low cost contracting strategy apparently are of less or no importance for explaining cost effects in Sweden. In particular, greater emphasis on a low cost contracting strategy is not found to result in larger cost reductions on the average than a lower emphasis in the Swedish context.

Procurement history was found to be important for explaining cost effects from contracting out in Denmark and Norway. The regression analysis apparently shows that it is of no importance in Sweden. An additional explorative analysis of the importance of procurement history for cost effects in Sweden is provided in Table 70.

Table 70.

Average cost effects distributed according to the number of public procurements in the past ten years in Swedish municipalities.

Number of procurements in the past ten years	Mean cost effect ^a	S.D.	Percentage which experienced:			N
			a cost decrease	No change	a cost Increase	
One	- 10.0 %	11.6	50 %	50 %	0 %	4
Two	+ 4.2 %	19.8	46 %	17 %	37 %	13
Three	- 1.0 %	9.7	24 %	48 %	28 %	25
Four or more	- 5.5 %	13.9	31 %	61 %	8 %	36
<i>Total</i>	- 2.7 %	14.1	33 %	48 %	19 %	78

^a The linear association between the four categories is insignificant, p-level = .225. Differences between groups are close to being significant, p-level = .109, ETA Squared = .078

The analysis finds that the size of cost effects varies between groups with different procurement histories. The variations (measured by standard deviations) *within* the four groups, however, are substantially larger than the variations between the four groups. Table 70 also includes the percentages within each group which experienced respectively a cost decrease and a cost increase. Inspection of the figures shows that the portions which experience cost increase and cost decrease becomes smaller by an increasingly higher number of procurements (except for the first category which however has a very low n, n=4). This finding may be interpreted as an indication of a decreasing effect on cost levels from competition over time (a variant of the ‘diminishing return

form competition' effect). Over time, or by additional public procurements, the 'market' finds equilibrium where the chance for cost changes is diminished (or cost levels stabilized). Although it was found that the procurement history wasn't important for explaining the average size of cost effect (see Table 69) the analysis in Table 70 highlight that a longer procurement history still is associated with different aspects of cost effects in terms of an increasing number of municipalities which experience 'no cost' change.

7.5.2.3 Explaining cost differences in UK

The UK survey included a unique item about the change in quality in conjunction with change in cost as a result from last round of procurement. Table 71 shows the distribution of cost and quality effects among all 66 cases in UK. Most notable is the (almost singular) association between the indications of decreased quality with a cost decrease (26 cases). All but one case, which indicated a decrease in quality level, also indicated that costs had decreased as a result from the last procurement round. It should be noted that the indication of change in quality levels do not necessarily equal a change in the managers' *satisfaction* with the quality of maintenance services provided by private contractors.

Table 71.
Procurement of park and road maintenance in UK: Cost and change in quality level.

Cost effect ^a	Quality level ^a						Total
	Increased (observed / expected)		No change (observed / expected)		Decreased (observed / expected)		
Decrease	14	(13.1)	11	(17.0)	26	(20.9)	51
No change	2	(2.6)	8	(3.3)	0	(4.1)	10
Increase	1	(1.3)	3	(1.7)	1	(2.0)	5
Total	17		22		27		66

^a Data based on self-reported impacts on cost and quality levels from the last round of procurement of park and road maintenance services
Test statistics for relationship between variables (6 cells has an expected count < 5, minimum expected count = 1.3): Fisher's exact test: 15.512, $p = .001$ (two-sided). Null hypothesis (no association) rejected. Cramer's $V = .347$. Similar results are found by ordinary chi-test.

Overall, analysis of the data in Table 71 indicates that changes in cost levels are significantly ($p < .01$) associated with changes in quality levels. In particular decrease in quality levels are significantly correlated with a decrease in cost levels. The analysis in Table 71 does not show whether the changes in quality / costs levels also is associated with change in managers' satisfaction with the quality levels provided by private contractors. Further analysis is needed to address this question.

Results from a logistic regression with a binary variable for cost effects as the response variable is shown in Table 72. Cost effect is coded with '0' for cases with no cost decrease and '1' for cases with cost decreases. The logistic regression includes several predictor variables. The analysis shows that the odds for a cost decrease are 14 times larger when quality is decreased than if quality is unchanged (or increased). The odds for a cost decrease are almost 2 times larger when low cost as contracting purpose is emphasized (by respondents) by an additional scale unit (runs from 0 to 10).

Table 72.

Logistic regression: Cost decrease (yes = 1 / no = 0) from contracting out park and road maintenance in UK

Variable	Regression coefficient (B)	S.E.	P-value	Exp. (B) (Odd Ratio)	90% CI Exp. (B)	
					Lower	Higher
Quality decrease (1=yes, 0=no)	2.669	1.484	.072	14.429	1.256	165.835
No quality change (1=yes, 0=no)	-1.442	.881	.102	.236	.055	1.007
Contracting purpose: Low cost (0-10) ^a	.536	.233	.021	1.710	1.166	2.508
Satisfaction with provided quality (0-10) ^b	-.002	.229	.993	.998	.684	1.456
Sector (park=0, road=1)	1.770	1.117	.113	5.868	.934	36.856
N			61			
Cox & Snell / Nagelkerke R square			.227 / .440			

^a Based on a unipolar 11-point response scale with anchors: 0 = 'not at all', 10 = 'in very high degree'

^b Based on a bipolar 11-point response scale with end anchors, where 0 = 'very unsatisfied', 10 = 'very satisfied'.

Two predictor variables are close to being significant at the p-level = .1, i.e. 'no quality change' (p = .102) and 'sector' (p = .113). The odds for a cost decrease are .235 (approx. four) times smaller when quality is unchanged than if quality is changed (increased or decreased). The odds for a cost decrease are almost 6 times higher in the road sector than in the park sector.

The analysis furthermore shows that the level of satisfaction with maintenance quality of services provided by private contractors is unaffected by changes in cost levels (p = .993, B = -.002). The findings from the logistic regression analysis in particular highlights the importance of contracting purpose (low maintenance costs) as well as changes in quality level for the economic outcomes from contracting out park and road maintenance services in Local Authorities in the UK.

7.6 Performance evaluations

Table 73 shows the evaluation of six performance dimensions of park and road maintenance services provided by private contractors for Danish municipalities. Performance was measured in the survey by respondents' evaluation of their level of satisfaction on an 11-point scale where 0 = 'very unsatisfactory' to 10 = 'very satisfactory'.

Table 73.
Municipal managers' performance evaluation of private contractors' delivery of road and park maintenance (Denmark)

Performance dimension ^a	Park maintenance (N=53)			Road maintenance (N=62)		
	N	Mean	S.D.	N	Mean	S.D.
Quality of maintenance services	53	7.1	1.7	62	7.4	1.6
Price / cost levels	53	7.1	1.7	62	7.4	1.4
Flexibility and change	53	6.7	1.8	61	6.9	1.8
Responsiveness and problem solving ^b	52	6.2	2.0	60	6.7	1.9
Development and innovative thinking	48	5.5	2.0	58	5.6	2.3
Satisfaction of long-term service objectives	47	6.0	2.1	55	6.2	2.3

^a Data based on self-reported evaluations based on responses for all items on an 11-point response scale with anchors (0 = 'very unsatisfactory' and 10 = 'very satisfactory').

^b Paired samples T-tests for each performance dimension shows no statistical significance at p-levels < .1 between road and park maintenance except for 'Responsiveness and problem solving', where $p = .020$ and $t(44) = -2.409$.

Danish municipalities are on the average most satisfied with the "quality of maintenance services" (mean score = 7.1 for parks and 7.4 for roads) and the "price / cost levels" (mean score = 7.1 for parks and 7.4 for roads) in case of both park and road maintenance. Municipalities are least satisfied with "development and innovative thinking" in case of both park and road maintenance (mean score = 5.5 for parks and 5.6 for roads). All average scores for roads are higher than the average scores for parks. However, only the higher score for 'follow-up and problem solving' for road maintenance (mean score = 6.7) compared to park maintenance (mean score = 6.2) is found statistically significant. For 5 out of the 6 performance dimensions there is no statistically significant difference between the scores for private contractors' delivery of road and park maintenance.

7.7 Exploring differences in performance

This section explores the importance of various characteristics which help explain differences in performance among Danish municipalities. In particular, the section explores the importance of contractual framework, collaborative norms, contracting strategy, competition, contracting levels, municipal size, and economic size of private sector involvement.

7.7.1 Importance of formal contractual framework

The series of analyses below investigate the importance of the formal contractual framework for private contractors' performance of park and road maintenance services. The analysis differentiates between two different dimensions of the formal contractual framework.⁶⁷ The first dimension, *formalized transactional contractual framework (TCF)*, is an index variable constructed by four single items (Cronbach Alpha = .870). This dimension measures the importance of the 'core' contract in terms of service specification, juridical matters, and formal economic sanctions. The second dimension, *formalized relational contractual framework (RCF)*, is an index variable constructed by four single items (Cronbach Alpha = .764). This dimension measures the importance of additional formalization of collaborative aspects in the contract, in term of engagement with users, competence requirements, joint planning and collaboration as well as more encompassing incentive structures. In the survey the eight items for formalized contractual framework dimensions were measured for both road and/or park maintenance (i.e. not measured separately).

Table 74 shows a bivariate of the differences in performance evaluation of private contractors between groups with respectively high and low levels of formalized transactional contract framework (TCF). All scores for performance evaluations scores are higher for the groups with higher levels of TCF than the group with lower levels of TCF. In a statistical test the evaluation of five out of six performance dimensions are found to be significantly higher by the group with higher levels of TCF than the group with lower levels of TCF. Statistically the difference in effect is greatest for 'quality' (ETA SQ = .132). The analysis shows no statistically significant ($p > .1$) difference between the two groups for 'flexibility and change'.

⁶⁷ See chapter on 'organizing contracting out' for further information about the two index constructs.

Table 74.

Differences in private performance levels for park and road maintenance between contractual relations with high and low level of formalized TRANSACTIONAL contract framework

Performance dimension ^a	Mean scores ^b		Mean score difference ^c	ETA SQ
	High level of TCF	Low level of TCF		
Quality	7.8	6.6	1.2**	.132
Price / Costs	7.6	6.7	0.9**	.077
Flexibility / change	7.0	6.6	0.4 ^{ns}	.013
Responsiveness and problem-solving	7.0	5.9	1.1**	.088
Development and innovation	6.0	5.0	1.0*	.050
Long term goals for services	6.7	5.4	1.3**	.088
Level of transactional framework	8.9	5.2	3.7**	.686
Level of contracting out (self-reported) ^d	43 %	35 %	8 % ^{ns}	.015

Sources: INOPS survey data (N = 130) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'very unsatisfactory' and 10 = 'Very satisfactory').

^b Groups based on a split by the median value for all cases with valid data. Median value = 7.5

^c Score differences evaluated at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^d Self-reported estimates for contracting levels for park and road maintenance.

Table 75 shows a bivariate analysis of the differences in performance evaluation of private contractors between groups with respectively high and low levels of formalized relational contract framework (RCF). All scores for performance evaluations scores are higher for the groups with higher levels of RCF than the group with lower levels of RCF. In a statistical test the evaluation of five out of six performance dimensions are found to be significantly higher by the group with higher levels of RCF than the group with lower levels of RCF. Statistically the difference in effect is greatest for '*development and innovation*' (ETA SQ = .062). The analysis shows no statistically significant (p > .1) difference between the two groups for '*price and costs*'. The difference in contracting levels (respectively 44 % and 31 %) between the two groups is furthermore found to be significant (p < .1).

Table 75.

Differences in private performance levels for park and road maintenance between contractual relations with high and low level of formalized RELATIONAL contractual frameworks

Performance dimension ^a	Mean scores ^b		Mean score difference ^c	ETA SQ
	High level of RCF	Low level of RCF		
Quality	7.5	6.9	0.6 [†]	.027
Price / Costs	7.4	7.0	0.4 ^{ns}	.015
Flexibility / change	7.1	6.3	0.8*	.045
Responsiveness and problem-solving	6.8	6.0	0.8*	.040
Development and innovation	6.0	4.9	1.1*	.062
Long term goals for services	6.5	5.6	0.9*	.043
Level of relational framework	6.0	2.7	3.3**	.628
Level of contracting out (roads, self-reported) ^d	44 %	31 %	13 %*	.043

Sources: INOPS survey data (N = 130) and Statistics Denmark.

^a All items measured by an 11-point response-scale with anchors (0 = 'very unsatisfactory' and 10 = 'Very satisfactory').

^b Groups based on a split by the median value for all cases with valid data. Median value = 4.5

^c Score differences evaluated at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^d Self-reported estimates for contracting levels for park and road maintenance.

The bivariate analyses of differences in performance evaluation of private contractors between groups with respectively higher and lower levels of TCF and RCF show that both types of contract frameworks are important in some degree. The differences, measured by the effect size in terms of estimates for ETA SQ⁶⁸, are larger between the groups with higher and lower levels of TCF than the groups with higher and lower levels of RCF.

7.7.2 Importance of collaborative norms

Table 76 shows a bivariate analysis of the differences in performance evaluation of private contractors between groups with respectively higher and lower levels of collaborative norms. The measure for collaborative norms is an index variable based on six survey items (Cronbach Alpha = .784).⁶⁹

Table 76.

Differences in private performance levels for maintenance between contractual relations with high and low level of collaborative norms

Performance dimension ^a	Mean scores ^b		Mean score difference ^c	ETA SQ
	Higher level of collaborative norms	Lower level of collaborative norms		
Quality	7.9	6.6	1.3 **	.136
Price / Costs	7.7	6.8	0.9 **	.094
Flexibility / change	7.4	6.2	1.2 **	.098
Responsiveness and problem-solving	7.1	5.7	1.4 **	.128
Development and innovation	6.3	4.6	1.7 **	.156
Long term goals for services	6.9	5.1	1.8 **	.165
Level of collaborative norms	8.0	5.6	3.0 **	.680
Level of contracting out (parks, self-reported) ^d	50 %	29 %	21 % **	.114

Sources: INOPS survey data (N = 122).

^a All performance items measured by an 11-point response-scale with anchors (0 = 'very unsatisfactory' and 10 = 'Very satisfactory').

^b Groups based on a split by the median value for all cases with valid data. Median value = 6.833.

^c Score differences evaluated at significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant.

^d Self-reported estimates for contracting levels for park and road maintenance.

All scores for performance evaluations scores are higher for the groups with higher levels of collaborative norms than the group with lower levels of collaborative norms. In a statistical test the evaluation of six out of six performance dimensions are found to be significantly higher by the group with higher levels of collaborative norms than the group with lower levels of collaborative

⁶⁸ ETA SQ is a measure for the percentage (i.e. a value between 0 and 1) of the variance in a dependent variable explained by a factor. See Richardson (2011).

⁶⁹ See also chapter on 'organizing contracting'.

norms. Statistically the difference in effect is greatest for the satisfaction with '*long term goals for services*' (ETA SQ = .165). The difference in contracting levels (respectively 50 % and 29 %) between the two groups is furthermore found to be significant ($p < .1$).

7.8 Explanatory analysis of performance in Denmark

The explanatory analysis is divided into two analyses. The first analysis is partial and explores the importance of the formal contractual framework for contractual performance. The formal contractual framework is operationalized by two constructs which measures two different contractual dimensions. The first construct is the level of formalized transactional contract framework (TCF). TCF roughly measures the contract dimensions emphasised as important for well-performing contracts in the mainstream theories on contracting out in the public sector. The second construct measures the formalization of additional relational contract dimensions in the contractual framework (RCF). The dimensions in the RCF are roughly associated with contract features mentioned in the literature on new forms for public-private relations, based on collaborative approaches (e.g. partnerships). The second and ‘full’ analysis includes the level of ‘collaborative norms’ as an additional explanatory variable for the level of contractual performance. Both analyses include a set of control variables which might also influence the level of contractual performance. The control variables are: level of competition, level of contracting out, municipal size and sector. Sector is included as control because the performance data are based on data from both the park and road sector (‘pooled’).

7.8.1 Main explanatory analysis

Table 77 shows results from several OLS regression analyses run in a ‘partial’ models based on six single items as measures for contractual performance (model A-F) and one ‘full’ model with an index variable as measure for contractual performance (model G). The level in TCF is an important explanatory factor for differences in the satisfaction with ‘*quality*’ and ‘*responsiveness and problem-solving*’. The level in RCF is found to an important explanatory factor for differences in the satisfaction with ‘*responsiveness and problem-solving*’, ‘*development and innovation*’ and ‘*long term goals for services*’. The level in RCF is also important for explaining differences in overall performance measures by the performance index in model G. Also, the results from the various models show that the level of competition is an important factor for explaining differences in performance levels. Remaining controls have only limited explanatory power across the models. The municipal size (population size) is apparently important for the differences in the satisfaction with quality as well as the contracting level is important for the differences in the satisfaction with

costs. A key finding is that both TCF and RCF help explain differences in contractual performance, however, they add to explaining *different* performance dimensions.

Table 77.

OLS regressions: Performance evaluation of private contractors: Importance of contract framework

	Performance of private contractors provision of maintenance (scale 0-10)						
	Model A Quality	Model B Costs	Model C Flexibility / change	Model D Responsiveness / problem-solving	Model E Development / innovation	Model F Long term goals for services	Model G performance index (A-F) ^e
<i>Predictor variables</i>	<i>Unstandardized beta-coefficients^a</i>						
TCF ^b (index, scale: 0-10)	+ .274 **	+ .093 ^{ns}	+ .005 ^{ns}	+ .213 †	-.019 ^{ns}	+ .154 ^{ns}	+ .092 ^{ns}
RCF ^b (index, scale: 0-10)	+ .101 ^{ns}	÷ .043 ^{ns}	+ .147 ^{ns}	+ .186 †	+ .506 **	+ .457 **	+ .237*
Level of competition (scale: 0-10)	+ .229 **	+ .087 ^{ns}	+ .198 *	+ .313 **	+ .315 *	+ .288 **	+ .231 **
Contracting level (Scale: 0-1) ^d	÷ .193 ^{ns}	+ 1.009 †	+ .487 ^{ns}	+ .016 ^{ns}	÷ .701 ^{ns}	÷ .383 ^{ns}	+ .195 ^{ns}
Sector (park=0, road=1)	+ .341 ^{ns}	+ .239 ^{ns}	+ .207 ^{ns}	+ .466 ^{ns}	+ .405 ^{ns}	+ .491 ^{ns}	+ .392 ^{ns}
Population (LN)	÷ .406 †	+ .179 ^{ns}	+ .002 ^{ns}	+ .022 ^{ns}	÷ .079 ^{ns}	÷ .125 ^{ns}	÷ .047 ^{ns}
N	97	98	99	97	97	91	88
VIF MAX	1.612	1.590	1.557	1.562	1.643	1.703	1.772
R ² / Adjusted R ²	.222 / .170	.114 / .056	.111 / .054	.266 / .217	.264 / .213	.314 / .265	.274 / .220

Data sources; INOPS survey data (pooled) for Denmark and Statistics Denmark.

^a Coefficients indicate the level of change in the dependent variable by changing one scale unit in a predictor variable. Beta-coefficients in bold indicate a statistical significant correlation Negative sign (-) indicates a negative correlation. Positive sign (+) indicates a positive correlation. Significance levels: † p < .1, * p < .05, ** p < .01, ns = non-significant. Diagnosis for outliers run for all models (cases with std. residuals >= 3.00). Influential outliers removed in model A (one case).

^b Index variables for respectively formalized transactional and relational contract frameworks.

^c Index variable based on six items. Cronbach Alpha = .784

^d Self-reported estimates for contracting levels (in percent of total maintenance budget) for respectively park and road maintenance.

^e index variable based on six items. Cronbach Alpha = .905

Table 78 shows the results from several OLS regression analysis run in a ‘full’ model with six single items (model A-F) and one index variable as measures for contractual performance (model G). A variable, which measures differences in the level of ‘collaborative norms’, is added to the predictor variables already used throughout the models shown in Table 78. Overall, the inclusion of the additional predictor variable adds explanatory power to the model. Estimates for R² are increased in all models. Comparison of the partial and full models also shows that several statistical ‘interaction effects’ are present.

Higher levels of collaborative norms are significantly correlated (associated) with higher levels of satisfaction with all performance dimensions (model A-F) as well as the index variable for overall performance (model G). Inclusion of the variable for collaborative norms furthermore changes some of the associations found in the models shown in Table 77. In particular higher levels of collaborative norms seem to work partial as a substitute (intervening variable) for a formalized

relational contract framework. In the full models shown in Table 78 compared to the partial models shown in Table 77 the level of formalized relational contract framework becomes insignificant in model D and model G. One interpretation of this finding is that a formalized relational contract framework in a ‘chain of causation’ generate a higher level of collaborative norms which in turn results in higher levels of performance related to ‘*responsiveness and problem-solving*’ as well as the overall performance measured by the index in model G. In the comparison of the partial and full models E and F, the level of formalized relational contract framework remains an important predictor variable (but gain slightly lower beta-coefficients). The findings for model E and F are indicative of interaction effects between collaborative norms, the formalized relational contract framework and performance.

Table 78.
OLS regressions: Performance of private contractors: Importance of contract framework and norms

Predictor variables	Performance of private contractors provision of maintenance (scale 0-10) ^a						
	Model A Quality	Model B Costs	Model C Flexibility / change	Model D Responsiveness / problem-solving	Model E Development / innovation	Model F Long term goals for services	Model G performance index (A-F) ^e
	Unstandardized beta-coefficients (β) ^a						
TCF ^b (index, scale: 0-10)	+.287**	+.183*	+.065 ^{ns}	+.261*	+.040 ^{ns}	+.222[†]	+.160[†]
RCF ^b (index, scale: 0-10)	÷.047 ^{ns}	÷.120 ^{ns}	+.035 ^{ns}	+.054 ^{ns}	+.339**	+.269[†]	+.078 ^{ns}
Collaborative norms (Index, scale: 0-10) ^c	+.482**	+.452**	+.389**	+.446**	+.541**	+.541**	+.507**
Level of competition (scale: 0-10)	+.138[†]	+.064 ^{ns}	+.171[†]	+.278**	+.259*	+.225*	+.162*
Contracting level (Scale: 0-1) ^d	÷.536 ^{ns}	+.145 ^{ns}	+.089 ^{ns}	÷.360 ^{ns}	÷ 1.113 ^{ns} (p=.127)	÷.515 ^{ns}	+.101 ^{ns}
Sector (park=0, road=1)	+.351 ^{ns}	+.099 ^{ns}	+.192 ^{ns}	+.467 ^{ns}	+.430 ^{ns}	+.465 ^{ns}	+.336 ^{ns}
Population (LN)	÷.455*	+.137 ^{ns}	÷.085 ^{ns}	÷.035 ^{ns}	÷.123 ^{ns}	÷.142 ^{ns}	÷.041 ^{ns}
N	93	92	95	93	91	87	86
VIF MAX	1.825	1.791	1.749	1.743	1.885	2.140	2.274
R ² / Adjusted R ²	.314 / .258	.310 / .253	.196 / .132	.355 / .302	.373 / .323	.409 / .356	.437 / .386

Data sources; INOPS survey data (pooled) for Denmark and Statistics Denmark.

^a Coefficients indicate the level of change in the dependent variable by changing one scale unit in a predictor variable. Beta-coefficients in bold indicate a statistical significant correlation. Negative sign (÷) indicates a negative correlation. Positive sign (+) indicates a positive correlation. Significance levels: [†] p < .1, * p < .05, ** p < .01, ns = non-significant. Diagnosis for outliers run for all models (cases with std. residuals >= 3.00). Influential outliers removed in model A (one) and B (two). The regression in model A with influential outlier included change level of competition to insignificant (p=.109), sign maintained (+.133). The regression in model B with influential outliers included change RCF to significant (p < .1), negative sign maintained (-.167) and TCF change to insignificant (p = .108), positive sign maintained (+.148).

^b Index variables for respectively four items for formalized transactional framework (Alpha = .846) and four items for relational contract framework (Alpha = .757).

^c Index variable for collaborative norms based on six items. Cronbach Alpha = .784.

^d Self-reported estimates for contracting levels (percentage of maintenance budget spend on private providers) for respectively park and road maintenance.

^e index variable for performance based on six items. Cronbach Alpha = .905.

The inclusion of collaborative norms also changes the importance of TCF in several models. In particular, the level of TCF becomes more important for explaining performance in several models,

including model B (cost) and model F (long term goals for services) as well as model G (performance index). The analysis indicates that some cases with higher levels of formalized transactional contract framework perform relatively poorly on the cost dimensions (model B) due to lower levels of collaborative norms, but this is not revealed in the partial model B shown in Table 77 due to the exclusion of the variable for collaborative norms (which acts as a ‘suppressor’ variable). By inclusion of the control for the level of collaborative norms in the full model B shown in Table 78 it is indicated that higher levels of TCF are positively associated with cost performance at fixed levels of collaborative norms. In addition the explanatory power (R^2) of model B is improved by inclusion of the variable for collaborative norms in model B (from .114 to .311). The suppressor effect of collaborative norms on TCF found in model B is also found in model F and G. Theoretically, the effect can be explained by the increased flexibility, that collaboration adds to the formal parts of the contractual relation, through which the parties can adjust for unforeseen contingencies in ways that improves (public managers’ satisfaction with) contractual performance. Without the flexibility provided by collaboration the formal contract becomes ‘rigid’ and less able to address unforeseen contingencies in ways that impede contractual performance. The apparent change from inclusion of RCF in significance and beta-coefficients for contracting level in model B indicate that TCF are correlated with contracting level.

The overall finding, from the analysis shown in Table 77, that the formalized contract framework is an important predictor of performance, is confirmed by the analysis shown in Table 78. The finding that TCF and RCF are also important for predicting differences between performance dimensions is also confirmed. The overall importance of competition level is confirmed as well.

7.8.1.1 Alternative explanatory factors

Alternative analyses were run with different combinations of predictor variables as well as inclusion of additional predictor variables. In particular the effects from two additional predictor variables were investigated. The first ‘alternative’ variable was a categorical variable for whether a cost saving or not has been achieved in the last procurement round (coded: yes = 1, no = 0). This variable was only tested in an alternative model (B1) where it was added to the model B shown in Table 78. The second ‘alternative’ variable was also a categorical variable for the total economic value of the engagement with private contractors (coded, high = 1, low = 0). The coding was based

on the median values for respectively parks and roads (as the economic size of the two sectors differs by almost a factor 3 in municipal budgets). Inclusion of the two variables provides additional insights to the findings from the main analysis shown in Table 78.

The addition of a categorical variable for the cost effect from last round of procurement (percent change in operational cost) in model B in Table 78 (performance measured by satisfaction with costs) added explanatory power.⁷⁰ In an alternative model 'B1' a categorical variable for whether a cost savings had been achieved or not (or cost were increased) in the last round of public procurement was significantly correlated, however close to the cut off value $p = .1$ ($p = .099$) with the satisfaction level with cost levels. The direction of the beta-coefficient (-.507) indicates that a cost saving are positively correlated with a higher satisfaction with cost levels. An alternative analysis to the main model B was also run with inclusion of a categorical variable for the size of the economic value of services contracted out (high / low).⁷¹ In the alternative model 'B2', the size of economic value was not directly correlated with the satisfaction with cost levels, but increased the size of the beta-coefficient for RCF (from -.120 to -.216) as well as changed the significance of the correlation ($p = .042$). The findings from the alternative analyses in model B1 and B2 challenges findings in the main model (B) and indicate that higher levels of RCF may be associated with relatively less satisfaction with cost levels.

No substantial effects were found from including economic value as an additional predictor in an alternative model A2 (satisfaction with maintenance quality). Neither was any substantial effects found from including economic value included as predictor in an alternative model C2. However, explanatory power (R^2) and values for significance are slightly improved as well as effect sizes of significant predictors were slightly increased in the alternative model C2 compared to the findings in the main model C. The alternative model D2, with economic value included as predictor, changed the findings in the main model (model D). The categorical variable for 'sector' changed to significant ($p = .082$) with a $\beta = .658$. The finding indicates that, when additional control for economic value (which acts as a 'suppressor variable' for sector) is included, the satisfaction with '*Responsiveness / problem-solving*' is higher in the road sector than the park sector. This finding is

⁷⁰ Model summary: R^2 / adj. $R^2 = .391$ / $.312$. $N = 71$. Max VIF = 1.950. The number of cases in the alternative model B1 is reduced due to missing data and estimates should not be compared directly between the models. One influential outlier removed (std. residual ≥ 3.00). Unstandardized beta-coefficient for cost effect = $-.501$, $p < .1$. The variable for cost effect also interacts with RCF which become negatively associated with cost performance (beta = $-.235$, $p < .05$).

⁷¹ Model summary: R^2 / adj. $R^2 = .265$ / $.190$. $N = 87$. Max VIF = 1.900. The number of cases in the alternative model B2 is reduced due to missing data and estimates should not be compared directly between the models. No influential outliers detected (std. residual ≥ 3.00). Unstandardized beta-coefficient for economic value = $-.261$, $p = .547$.

congruent with findings from comparison of satisfactions levels between park and road maintenance for *'Responsiveness / problem-solving'* (test of mean difference for item by t-test, p-level < .1).

The alternative model 'E2', with economic value included as predictor, changed the findings in the main model (model E). In particular, the correlation for contracting level becomes significant and the effect (β) is increased ($p = .029$, $\beta = -1.963$) as well as economic value is significantly correlated ($p = .080$, $\beta = .972$). The finding indicates that higher satisfaction levels with development and innovation of maintenance operations are found in cases of large scale economic involvements with private contractors; however, mainly when lesser shares of the maintenance budget is allocated to private contractors (or larger shares of maintenance budgets are allocated to the in-house provider).

The alternative model 'F2' with economic value included as predictor, changed the correlation for TCF to insignificant ($p = .268$, beta-coefficient = .158). However, the observed effects from the inclusion of economic value are likely to be due to a simple 'mediation effect' as higher levels of TCF is positively correlated with a larger economic value (i.e. more formal and elaborate contractual frameworks are used in contracts with higher economic value).

7.9 Comparing performance across Denmark, Sweden, Norway and UK

This section provides a comparison of municipal managers' performance evaluations of private contractors' delivery of park and road maintenance in Denmark, Sweden, Norway and UK. Performance is evaluated by scores for the satisfaction among municipal managers for altogether 5 performance dimensions. Overall, the comparison shows that the differences in performance evaluations for both parks and roads between the countries are small. The scores for the performance of private contractors in UK are overall slightly higher for both parks and roads than in Denmark, Sweden and Norway. The scores for the performance of private contractors' delivery of maintenance services seem to be slightly lower in Norway than in UK, Sweden and Denmark. The tendency for lower scores in Norway is most notable for the score for '*price / cost levels*' and for '*satisfaction with long term service objectives*' as well as being more pronounced for park maintenance compared to road maintenance.

Given the relatively higher inter-municipal variations for performance evaluations within each country (measured by standard deviations, see country appendices) it is furthermore indicated that *intra*-country differences are larger than *inter*-country differences.

Table 79.

Cross-national comparison of performance evaluations of private delivery of road maintenance services

	Performance dimensions of road maintenance*					
	Quality of maintenance services	Price / cost levels	Flexibility and change	Follow- up and problem solving	Development and innovative thinking	Long-term service objectives
Denmark (N=62)	7.4	7.4	6.9	6.7	5.6	6.2
Sweden (N=71)	7.1	6.5	7.1	6.8	6.2	6.0
Norway (N=69)	7.1	6.3	7.3	6.8	5.5	5.2
UK (N=23)	7.4	7.2	7.3	7.2	6.6	6.5
Weighted average (N=225)	7.2	6.8	7.1	6.8	5.9	5.9

* Data based on responses for all items on an 11-point response scale with anchors (0 = 'very unsatisfactory' and 10 = 'very satisfactory')

Table 79 shows the average scores for municipal managers' performance evaluation of private provision of road maintenance services in Denmark, Sweden, Norway and UK. Across all countries (N=225) private contractors' delivery of road maintenance receives the highest scores for '*quality of maintenance*' (average score = 7.2) and '*flexibility and change*' (average score = 6.8) while the lowest scores are received for '*development and innovative thinking*' (average score = 5.9) and '*satisfaction of long-term service objectives*' (average score = 5.9). Furthermore, none of the

average scores are below the scale mid-point ('5') which would indicate a degree of 'unsatisfactory' performance evaluation (on the average).

Some differences in the scores for performance evaluations exist among the countries for individual performance dimensions. Notable, the scores for UK are either at level of slightly higher than the scores for the three Scandinavian countries – in particular in comparison with Norway. Only for '*price / cost level*' a lower score is received for UK (average score = 7.2) than for another country (Denmark, average score = 7.4).

Table 80 shows the results from an ANOVA analysis of differences in satisfaction levels with private contractor's performance of road maintenance services. The statistical analysis of mean differences for satisfaction levels with private contractors' performance of road maintenance services between countries finds only very few statistical significant differences. The low N as well as relatively high variation for UK Local Authorities contributes to the lack of statistical significance for the mean differences to Sweden, Norway and Denmark.

Table 80.

Four countries: Managers' satisfaction with private contractors' performance of road maintenance services

Performance dimension	Mean scores (standard deviations)				
	UK (N=23) ^b	Sweden (N=71)	Norway (N=69)	Denmark (N=62)	Four countries (N = 225) ^c
Maintenance quality	7.4 (2.4)	7.1 ^{ns} (1.6)	7.1 ^{ns} (1.6)	7.4 ^{ns} (1.6)	7.2 ^{ns} (1.7)
Cost / price levels	7.2 (2.6)	6.5 ^{ns} (1.7)	6.3 ^{ns} (1.7)	7.4 ^{ns} (1.4)	6.8 ^{**} (1.8)
Flexibility and change	7.3 (2.9)	7.1 ^{ns} (1.7)	7.3 ^{ns} (1.7)	6.9 ^{ns} (1.8)	7.1 ^{ns} (1.9)
Follow up and problem solving	7.2 (2.6)	6.8 ^{ns} (1.8)	6.8 ^{ns} (1.9)	6.7 ^{ns} (1.9)	6.8 ^{ns} (1.9)
Development and innovative thinking	6.6 (2.5)	6.2 ^{ns} (2.1)	5.5 ^{ns} (2.1)	5.6 ^{ns} (2.3)	5.9 ^{ns} (p=.117) (2.2)
Long term objectives	6.5 (2.9)	6.0 ^{ns} (1.9)	5.2 [†] (2.2)	6.2 ^{ns} (2.3)	5.9 [*] (2.2)
Performance index (six items) ^d	7.0 (2.5)	6.6 ^{ns} (1.6)	6.4 ^{ns} (1.5)	6.8 ^{ns} (1.5)	6.6 ^{ns} (1.7)

Source: INOPS survey data

^a All items measured by the respondent's agreement with the statement on an 11-point response scale with anchors (0 = '*very unsatisfactory*' and 10 = '*very satisfactory*').

^b UK is used as a 'benchmark country' for comparison of differences with three other countries (ONE-WAY ANOVA with Tukey and Games-Howell post hoc test, assessment of homogeneity of variance based on Levene's test, $p < .05$). Significance levels: [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant.

^c Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^d Index based on all six single performance items. Alpha = .932 (N valid for all four countries =194).

The satisfaction with '*cost / price levels*' in Denmark is found to be significantly higher than in Norway (mean difference = 1.1, $p = .001$) and Sweden (mean difference = .9, $p = .005$). Also, the difference in satisfaction levels for '*long term objectives*' between Norway and Denmark is significant (mean difference = 1.0, $p = .068$).

Table 81 shows the average scores for municipal managers' performance evaluation of private provision of park maintenance services in Denmark, Sweden, Norway and UK. Across all countries (N=185) private contractors' delivery of road maintenance receives the highest scores for '*quality of maintenance*' (average score = 7.1), '*price / cost levels*' (average score = 7.0) '*flexibility and change*' (average score = 7.0) while the lowest scores are received for '*development and innovative thinking*' (average score = 5.8) and '*satisfaction of long-term service objectives*' (average score = 5.7). Furthermore, all except one of the average scores are above the scale mid-point ('5') which indicate a degree of 'satisfactory' performance evaluation (on the average).

Some differences in the mean scores for satisfaction levels with private contractors' performance of road maintenance are found across the countries for individual performance dimensions. Notable, all scores for UK are slightly higher than the scores for the three Scandinavian countries – in particular in comparison with Norway. An exception is the mean score for 'price / cost levels' where the mean score for Denmark (7.4) is slightly higher than the mean score for the UK (7.2).

Overall, the comparison of mean scores for satisfaction levels with private contractors' performance of road maintenance in the four countries finds that the highest satisfaction levels are found in the UK (although mean differences were statistically insignificant), followed by Denmark with the second highest satisfaction levels and Sweden with the third highest satisfaction levels. The lowest satisfaction levels with private contractors' performance of road maintenance services were found in Norway.

Table 81.
Cross-national comparison of performance evaluations of private delivery of park maintenance services

	Performance dimensions of park maintenance *					
	Quality of maintenance services	Price / cost levels	Flexibility and change	Follow- up and problem solving	Development and innovative thinking	Long-term service objectives
Denmark (N=53)	7.1	7.1	6.7	6.2	5.5	6.0
Sweden (N=48)	6.8	6.6	7.2	6.8	5.9	5.3
Norway (N=26)	6.5	5.8	6.4	6.3	5.3	4.6
UK (N=57)	7.6	7.8	7.6	7.5	6.4	6.3
Weighted average (N=184)	7.1	7.0	7.1	6.8	5.8	5.7

* Data based on responses for all items on an 11-point response scale with anchors (0 = 'very unsatisfactory' and 10 = 'very satisfactory')

A comparison of the performance evaluation of private contractors' delivery of respectively park and road maintenance services shows only minimal differences in the absolute scores. The largest differences in the absolute scores for the various performance dimensions are between private

delivery of respectively park and road maintenance in Norway (e.g. price/cost levels, parks = 5.8 and roads =6.3).

Table 82 shows the results from an analysis of differences in satisfaction levels with private contractor's performance of park maintenance services between the UK, Sweden, Norway and Denmark. For park maintenance it is found that the satisfaction levels among Local Authorities in the UK are significantly higher for several performance dimensions than among municipalities in Denmark, Sweden and Norway. The differences in mean scores as well as the statistical significance of the differences are most distinctive between the UK and Norway. The mean scores for the UK are higher for all items compared to all three Scandinavian countries. Only for 'maintenance quality' and 'development and innovative thinking' there are no statistical significant differences between the satisfaction levels in the four countries.

Comparison of mean scores for a composite performance index based on the six single items (summative) reduces the cases in the analysis from 184 (for the analysis of maintenance quality) to 159. The comparison of scores for the performance index shows that the mean differences are statistically significant between the UK and Norway ($p = .029$) and the UK and Sweden ($p = .080$). The mean difference between the UK and Denmark are insignificant ($p = .203$).

Table 82.

Four countries: Managers' satisfaction with private contractors' performance of park maintenance services

Performance dimension	Mean scores (standard deviations)				
	UK (N=57) ^b	Sweden (N=48)	Norway (N=26)	Denmark (N=53)	Four countries (N = 184) ^c
Maintenance quality	7.6 (1.9)	6.8 ^{ns} (2.2)	6.5 [†] (1.7)	7.1 ^{ns} (1.7)	7.1 [†] (2.0)
Cost / price levels	7.8 (1.8)	6.6 ^{**} (2.3)	5.8 ^{**} (2.2)	7.1 ^{ns} (1.7)	7.0 ^{**} (2.0)
Flexibility and change	7.6 (2.1)	7.2 ^{ns} (2.0)	6.4 [†] (1.8)	6.7 ^{ns} ($p=.125$) (1.8)	7.1 [*] (2.1)
Follow up and problem solving	7.5 (2.0)	6.8 ^{ns} (2.1)	6.3 [†] (2.5)	6.2 ^{**} (2.1)	6.8 ^{**} (2.1)
Development and innovative thinking	6.4 (2.5)	5.9 ^{ns} (2.3)	5.3 ^{ns} (3.2)	5.5 ^{ns} (2.0)	5.8 ^{ns} ($p=.116$) (2.3)
Long term objectives	6.3 (2.6)	5.3 ^{ns} (2.4)	4.6 [*] (2.2)	6.0 ^{ns} (2.1)	5.7 [*] (2.4)
Performance index (six items) ^d	7.2 (1.9)	6.2 [†] (1.9)	5.9 [*] (1.7)	6.4 ^{ns} (1.6)	6.6 [*] (1.8)

Source: INOPS survey data (N for items varies between 184-159)

^a All items measured by the respondent's agreement with the statement on an 11-point response scale with anchors (0 = 'very unsatisfactory' and 10 = 'very satisfactory').

^b UK is used as a 'benchmark country' for comparison of differences with three other countries (ONE-WAY ANOVA with Tukey post hoc test, homogeneity assumed, Levene's test, $p = .05$). Significance levels: [†] $p < .1$, * $p < .05$, ** $p < .01$, ns = non-significant.

^c Test for significance of differences between at least one country and the others (ONE-WAY ANOVA).

^d Index based on all six single performance items. Alpha = .932 (N valid four countries = 159).

Additional findings from the analysis (not shown) are that the mean score for '*price / cost levels*' is significantly higher in Denmark than Norway, (mean score difference = 1.3, $p = .029$) as well as for '*long term objectives*' (mean score difference = 1.4, $p = .080$).

Overall, the comparison of mean scores for satisfaction levels with private contractors' performance of park maintenance in the four countries finds that the highest satisfaction levels are found in the UK, followed by Denmark with as the second highest satisfaction levels and Sweden with the third highest satisfaction levels. However, the differences between Denmark and Sweden were marginal and statistically insignificant for all items. The lowest satisfaction levels with performance were found in Norway.

A comparison of the analysis of satisfaction levels with private contractor's provision of respectively park maintenance and road maintenance in the four countries highlights that differences between the four countries generally are greater for parks than for roads.

8 ANALYSIS – CASE STUDIES

8.1 Case overview

This chapter contains summaries of a range of case studies on contracting out of park and road maintenance services in Denmark, Norway, the UK and Sweden. Full reports are available in separate documents.

The cases have been chosen because they represent some special – or innovative – features in comparison with the ‘normal’ case for contracting out. Special features consists in both the stage of maturity of contracting out as well as forms for contracting out which can be regarded as ‘innovative’ compared to a standard approach to contracting out. Table 83 provides an overview of altogether ten case-studies of contracting out. Six cases are from Denmark, two cases are from the UK, one case is from Norway and one case is from Sweden. Most cases are presented with full identification of the municipality and involved contractors, however, one case is presented without reference to its identity.

In contrast to the quantitative analysis based on survey data and register based data, the case studies enable exploration of what is ‘going on’ within particular context and trace outcomes to the particular conditions within a given context. While findings from case studies normally are regarded to have a limited scope for generalizability, they nevertheless warrant improved reflections and in-depth assessments of whether particular experiences and outcomes can be transferred across context (‘natural generalization’). The chapter relies mainly on analysis of each case within its particular context rather than comparative analysis across all cases. However, the selected cases also allows for addressing cross-case questions. For example, the cases illustrate well the findings from the quantitative analysis on the comparative advancement of different contractual arrangements. A cross-comparison of cases from each country-context, for example, shows that contractual arrangements with the highest degree of involvement and engagement of private contractors are found in the UK while Norwegian municipalities are still challenged by the basic issues in the use of contracting out (e.g. effective markets and competition).

Table 83.
Ten cases of contracting out park and road maintenance – an overview

Case	Key-words	Characteristics
Anonymiseret ('standard') kommune, Danmark	Standardtilgang til udlicitering. Vigtigheden af et 'godt løbende samarbejde' i forhold til kommunens styring, planlægning og udvikling af driften.	Stor kommune, Socialdemokratisk domineret byråd. Fortsætterkommune (2007). Alt er udliciteret (primært geografisk opdelt i flere kontrakter), standardtilgang til udbud (kontraktgrundlag og opgavebeskrivelse).
Skive kommune, Danmark	Erfaringer med implementering af vejpartnering (byområder) og langvarige funktionskontrakter (landområder). Besparelser og årsager til besparelser. Markedsdynamik og kontraktformer.	Mellemstor kommune (47.000 indb.), Venstredomineret byråd (tidligere domineret af soc. demo.). Sammenlægningskommune (2007) Delvist udlicitering på vejområdet, ingen udlicitering på parkområdet. Funktionskontrakt (siden 2014) og vejpartnering (siden 2016) på asfaltbelægninger / vejområdet.
Holstebro kommune, Danmark	Erfaringer med anvendelse af udlicitering (totaludbud) siden 2000. Udvikling af udlicitering over tid. Fokus, samarbejde og partnerskab.	Mellemstor kommune (58.000 indb.) Byråd skiftevis domineret af socialdemokratiet og venstre. Sammenlægningskommune (2007). Alt vej- og parkdrift er udliciteret siden 2000.
Solrød kommune, Danmark	Erfaringer med 'omvendt' licitation ved førstegangsudbud (totaludbud på parkområdet). Involvering af entreprenøren i planlægning og prioritering af driftsopgaver.	Lille kommune (22.000 indb.). Venstredomineret byråd. Fortsætterkommune (2007). Al parkdrift udliciteret siden 2013.
Favrskov kommune, Danmark	Erfaringer med udlicitering (totaludbud på vej og parkområdet) ved førstegangsudbud. Udviklingsstrategi for park- og vejområdet Besparelser og årsager til besparelser.	Mellemstor kommune (47.000 indb.). Byråd skiftevis domineret af socialdemokratiet og venstre. Sammenlægningskommune (2007). Al drift udliciteret i samlet kontrakt på vej- og parkområdet, siden 2012.
Roskilde kommune, Danmark	Anvendelse af markedet som driver til udvikling og 'benchmark' af egen driftsorganisation.	Større kommune (86.000 indb.), Byråd domineret af socialdemokratiet. Sammenlægningskommune (2007). Mindre og fast andel af parkdriften er udliciteret siden 1990'erne.
Oslo kommune, Norge	Udfordringer ved markedsgørelse af vej- og parkdriften i Norges største kommune. Erfaringer med kommunalt driftsselskab og udlicitering.	Stor kommune (620.000 indb.). Byråd domineret af borgerlige partier (1997-2015). Al vej- og parkdrift er udliciteret (siden 2007 på parkområdet og 2013 på vejområdet).
Täby kommune, Sverige	Erfaringer med unik model for partnerskabstilgang til udlicitering i Skandinavien. Inddragelse af entreprenør i forhold til opfyldelse af kommunens strategiske målsætninger for parkområdet.	Mellemstor kommune (64.000 indb.). Byråd domineret af borgerlige partier. Al drift på vej- og parkområdet udliciteret i samlet kontrakt siden 2004.
UK, Burgess Park	Erfaringer med partnerskabsmodeller for udlicitering, hvor entreprenøren også inddrages i forhold til opfyldelse af sociale og lokale målsætninger/politikker.	Burgess Park, Southwark Council. Udlicitering af drift og forvaltning til en privat entreprenør i en langvarig kontrakt (op til 14 år).
UK, Olympic Park	Erfaringer med partnerskabsmodeller for udlicitering, hvor entreprenøren også inddrages i forhold til opfyldelse af sociale og lokale målsætninger/politikker	Olympic Park, London. Oprettelse af særlig planlægningsmyndighed med ansvar for forvaltning af parkanlæg, der geografisk indgår i flere kommuner.

The presentation of the case-studies starts out with a resume of a case-study of a 'base-line scenario' in terms of an example of a well-working implementation of a standard or 'conventional' approach to contracting out. The 'opening' case represents a case of the dynamics of key dimensions of contractual relationships in terms of formal and informal parts. Formally, the case is

characterized by the standard ‘transactional’ contract framework in combination with a well-working regime for contract management.

8.2 The ‘standard’ municipality

Traditionelt drejer udlicitering sig om at få prissat en på forhånd beskrevet opgave og sikre at opgaven bliver udført som beskrevet. Kommunen har i denne forbindelse ofte en kontrol- og tilsynsfunktion tilknyttet kontraktstyringen. Casestudiet af ‘standardkommunen’ viser at udlicitering fungerer bedst i det daglige, når der samarbejdes, opbygges tillid og deles viden, og når opgaverne kan tilpasses og udvikles.⁷² Casestudiet undersøger særligt betydningen af transaktionelle og relationelle dimensioner for et kontraktforløb, der bygger på en standardtilgang til udlicitering.

8.2.1 Den konventionelle forståelse: De transaktionelle dimensioner

I både administrativ praksis og i gængse politologiske teorier har en vellykket brug af udlicitering traditionelt set været anset for et spørgsmål om, hvorvidt de fire følgende forudsætninger kan opfyldes:

- Kan opgaven beskrives klart og entydigt?
- Kan opgaven prissættes gennem konkurrence mellem en række tilbudsgivere?
- Kan det kontrolleres/dokumenteres, at opgaven bliver udført som beskrevet?
- Kan der anvendes økonomiske sanktioner, såfremt at opgaverne ikke bliver udført som beskrevet?

De fire forudsætninger kan samlet set betegnes som de ‘transaktionelle dimensioner’. I en konventionel forståelse af udlicitering er udfordringen at tilvejebringe en klar og tydelig opgavebeskrivelse, som tilbudsgivere kan beregne deres omkostninger ud fra, og som efterfølgende kan bruges til at styre og dokumentere, om det vindende firma leverer det aftalte. Da den primære motivation for at løse opgaven anses for at være ønsket om at tjene penge, har den primære metode til at sanktionere en eventuel utilfredsstillende opgaveløsning taget udgangspunkt i muligheden for

⁷² Casestudiet er publiceret i artikelform i 2015 i tidsskriftet *Politica*, årgang 47, nr. 4, side 522-540, med titlen: ”Samarbejdets betydning i den ’klassiske udlicitering’: en analyse af de transaktionelle og relationelle dimensioners betydning.” Nærværende tekst er baseret på artiklen.

at anvende økonomiske sanktioner. En økonomisk sanktion kan eksempelvis være en reduktion i den aftalte betaling.

Samtidigt anses en løbende kontrol og dokumentation som nødvendig, da et firma kan tjene penge – ikke bare ved at få betaling for at løse opgaven, men også ved ikke at løse opgaverne i det omfang det ikke bliver opdaget. Da en effektiv kontrol og dokumentation af opgaven typisk kræver en del tid og ressourcer, er det på den anden side ønskværdigt, at dette kan begrænses i størst muligt omfang. En række offentlige opgaver er blevet anset som særligt velegnede til at blive udliciteret, fordi de fire forhold i høj grad anses for at kunne blive opfyldt. Det drejer sig eksempelvis om rengøring, affaldsindsamling eller driftsopgaver på vej- og parkområdet. En række studier af udlicitering viser også, at det især er ved sådanne typer af opgaver, at der kan opnås besparelser.

8.2.2 *En alternativ forståelse: De relationelle dimensioner*

Sociologisk kontraktteori påpeger, i modsætning til de gængse politologiske teorier, at langt de fleste kontraktforhold i virkelighedens verden også indebærer en grad af samarbejde, løbende kommunikation, tilpasning og tillidsopbygning mellem de involverede personer for at kunne fungere i det daglige. I denne alternative forståelse er opfyldelse af de konventionelle forudsætninger ikke tilstrækkeligt.

I den sociologiske kontraktteori påpeges det især, at langt de fleste af virkelighedens opgaver ikke kan beskrives i alle detaljer på forhånd, og at forudsætningerne for kontrakten kan ændre sig uventet. Derfor skal parterne ikke bare se på den formelle opgavebeskrivelse, men de må også løbende etablere en fælles forståelse af opgaven. I tillæg til de transaktionelle dimensioner er der således også en række 'relationelle dimensioner', som må anses som vigtige, når udlicitering af offentlige opgaver skal fungere i det daglige.

8.2.3 *Case-kontekst*

Case-kommunen er en større dansk kommune, der har anvendt udlicitering som primær strategi for organisering af driften af de kommunale parker og grønne områder i mere end 10 år. Efter en afvikling af egen driftsorganisation har al drift af parker og grønne områder været udliciteret til forskellige private virksomheder i en række sideløbende og primært geografisk afgrænsede kontrakter. Case-kommunen havde i forbindelse med implementeringen af udlicitering opbygget en intern driftsstyreenhed med ansvar for udbud, driftsplanlægning og kontraktstyring af driften af

parker og grønne områder. I casen blev den danske kontraktstandard AB92 (almindelige betingelser for arbejder og leverancer i bygge- og anlægsvirksomhed) anvendt til regulering af almindelige kontraktmæssige vilkår og som forlæg for opbygningen af det samlede materiale. AB92 indeholder en række standardvilkår for entreprisarbejder i Danmark, hvortil der er udarbejdet ministeriel vejledning til anvendelsen af standarden. Kommunen anvendte sit eget system for specifikation af de fagtekniske krav til selve arbejdets udførelse og kvalitet. I sin opbygning og indhold fremstod kommunens specifikation som en lokal tilpasning og videreudvikling af parksektorens oprindelige standard for specifikation af opgaver (Juul m.fl., 1998).

8.2.4 Relationelle dynamikker

Betydningen af velfungerende relationelle dimensioner blev fremhævet i forhold til flere kritiske forhold i kontraktforløbet. I casen fremgik det særligt, at velfungerende relationelle dimensioner var centrale i forhold til: a) kvaliteten af det udførte arbejde, b) karakteren af kontraktstyringen og funktionen af de transaktionelle dimensioner og c) tilvejebringelse af vigtig viden i forhold til den overordnede planlægning og styring af driften samt parkområderne generelt.

I informantens beskrivelse af de betydende dimensioner i kontraktforløbet i forhold til kvaliteten i det udførte arbejde fremgik det, at både en række transaktionelle og relationelle dimensioner var anset som værende af væsentlig betydning i et givent kontraktforløb. I overensstemmelse med den konventionelle teori om udlicitering blev eksempelvis en præcis opgavespecifikation og den efterfølgende håndhævelse af denne i et kontraktforløb fremhævet. I sammenhæng hermed blev det fremhævet, at 'samarbejdet' var den mest betydende faktor i et kontraktforløb, herunder for opnåelse af en tilfredsstillende udførelse af driften:

"På den ene side er det vores kvalitetsbeskrivelse, som vi gør meget ud af at lave meget præcise under udbuddet, men som vi også gør meget ud af at håndhæve. På den anden side, så er det samarbejdet med entreprenøren. Hvis samarbejdet med entreprenøren ikke fungerer, så går det 'ud over det hele', og dermed også kvaliteten af arbejdet [udførelse af driftsopgaverne]. Det er altså det med samarbejdet, der betyder mest."

Et velfungerende 'samarbejde' blev således anset som en afgørende forudsætning for, at der blev leveret den forventede kvalitet i udførelsen af driftsopgaver. Generelt fremhævedes kontraktforløb,

hvor de relationelle dimensioner var velfungerede, i modsætning til kontraktforløb, hvor de relationelle dimensioner ikke var velfungerende, som positive i forhold til både kvaliteten i arbejdets udførelse og kontraktstyringen. I denne forstand er det muligt at tale om velfungerende relationelle dimensioner, som en forudsætning for en velfungerende funktion af de centrale transaktionelle dimensioner.

I forhold til en dårlig funktion af de relationelle dimensioner, i form af manglende 'kemi' i de interpersonelle relationer, blev det endvidere fremhævet at de centrale transaktionelle dimensioner i den formelle kontraktstyring ikke alene var utilstrækkelige for at sikre en velfungerende drift, men også at karakteren af kontraktstyringen efterfølgende kunne skifte karakter til et kontraktforløb præget af magtspil og opportunistisk adfærd:

"Hvis de to ikke 'kan sammen', hvis 'kemien' ikke er der, hvis de ikke kan finde ud af at samarbejde om opgaven, så er det næsten lige meget hvor godt vi har lavet materialet, hvor god kvalitetsbeskrivelsen er, hvor god en procedure vi har. Hvis kemien ikke er der, så betyder det at man modarbejder hinanden. Entreprenøren forsøger at udnytte alle små uklarheder, der måtte være i systemet – og forvalteren på hans side udnytter sin magt."

I ovennævnte citat påpeges det, at dårligt fungerende relationelle dimensioner havde betydning for, hvordan de transaktionelle dimensioner kunne anvendes og sættes i spil. Forvalterens 'magt' lå eksempelvis i muligheder for at udføre ekstra kontrol og tilsyn og efterfølgende anvende økonomiske sanktioner ved mangler i det udførte arbejde. På den anden side kunne entreprenøren anvende eventuelle mangler og svagheder i opgavebeskrivelsen eller kontraktgrundlaget til at minimere indsatsen i udførelsen af opgaven. Samtidig peges der på, at de transaktionelle dimensioner i fravær af velfungerende relationelle dimensioner var ineffektive i forhold til at sikre et givent kontraktforløb. I denne forstand er det muligt at tale om, at de transaktionelle dimensioner ikke kan erstatte (substituere) relationelle dimensioner. I konsekvens kan de relationelle dimensioner fremhæves som en nødvendig (omend ikke tilstrækkelig) forudsætning for velfungerende kontraktforløb.

Velfungerende relationelle dimensioner i et givent kontraktforløb blev yderligere anset som en forudsætning for tilvejebringelse af den nødvendige viden for både den langsigtede planlægning af parkdriften og prioriteringer i de enkelte parkområder. Det var igennem de løbende møder mellem medarbejdere hos kommunens driftskontor og de forskellige entreprenørers medarbejdere –

både de mere formaliserede møder og de mere uformelle møder i form af gennemgange 'ude i marken' – at driftsstyringen opnåede den 'nødvendige' viden om både områdernes anvendelse og tilstand samt hvordan selve driften kunne tilrettelægges.

”En ulempe ved udlicitering er, at vi kommer længere og længere væk fra marken. Vi mister viden på sigt om, hvad der foregår i marken. Vi kommer til at sidde bag en skærm uden føling med hvad der foregår. Derfor lægger vi vægt på, at det skal være et tæt samarbejde. Det kan vi ikke undvære. At vi har regelmæssige driftsmøder, at vi har fælles tilsyn og kontrol. Det er på 14-dagsmøderne at jeg [driftsstyrer] i virkeligheden får en fornemmelse af hvad det er der sker derude og hvad det er, der bliver lavet og også kommer ud og ser – rent fysisk – sammen med entreprenøren, hvad der er deres viden og får del i alt det de ved om drift og udførsel. Den viden vil gå tabt, hvis vi ender med bare at sidde inde.”

En transaktionel tilgang til udlicitering – uden samarbejde og deling af viden – blev i casen således anset for at føre til tab af viden og dermed muligheder for at varetage almindelige planlægnings- og styringsfunktioner. Omvendt sikrede samarbejdet igennem de løbende driftsmøder og den fælles driftskontrol at nødvendig viden i forhold til den videre planlægning og styring af driften blev tilvejebragt. I case-kommunen havde valget af udlicitering som primære driftsstrategi og oprettelsen af et selvstændigt driftskontor, uden udførende medarbejdere i driften afskåret kommunen fra løbende at få opdateret viden om eksempelvis ny teknik, materiel og nye metoder eller løbende at have en direkte og daglig gang i kommunens parker og grønne områder gennem kollegaer i egen organisation. Varetagelsen af de transaktionelle funktioner var også anset som kontoropgaver ('sidde inde') som lå fjernt fra den fagtekniske viden, som varetagelsen af den udførende del af driften påkrævede.

8.2.5 Transaktionelle dynamikker

Betydningen af velfungerende – eller mindre velfungerende – transaktionelle dimensioner blev fremhævet i forhold til flere centrale forhold i et givent kontraktforløb. I casen fremgik det særligt, at velfungerende transaktionelle dimensioner var centrale i forhold til a) præcisering og sikring af opgaveudførelsen, b) prissætning og tilstrækkelig allokering af ressourcer i forhold til en tilfredsstillende varetagelse af driften, c) sikring af driften gennem enten kontrol eller læring, d)

skift i kontraktstyringen fra kontrol (negativt fokus) til udvikling (positivt fokus) og e) etablering af tillid.

I overensstemmelse med den konventionelle teori om udlicitering blev tilfredsstillelsen af en række transaktionelle dimensioner i casen anset som centrale forudsætninger for et givent kontraktforløb. De fremhævede forudsætninger omfattede en præcis specifikation af opgaven, en tilstrækkelig prissætning og ressourceallokering fra entreprenørens side samt sanktionsmuligheder, såfremt at kontraktforløbet ikke levede op til forvaltningens forventninger til løsning af driftsopgaverne:

”Det er meget vigtigt at have præcise beskrivelser af hvad der skal laves. Det er også meget nødvendigt at have nogle nøjagtige mængdeopgørelser og et nøjagtigt kortmateriale. Vi er også nød til at have nogle bodsmuligheder og nogle ’skarpe muligheder’ vi kan trække frem, hvis samarbejdet ikke kører eller hvis de [entreprenøren] ikke leverer ydelsen.”

Samtidigt med at kommunens muligheder for at tilfredsstille de transaktionelle forudsætninger gennem udarbejdelse af fyldestgørende specifikationer samt opfølgingsmuligheder ved et mangelfuldt kontraktforløb blev påpeget, var driftskontoret også opmærksom på en række risici og afvejninger i de transaktionelle forudsætninger:

”En af de værste ting at starte med er sådan en entreprenør, der i virkeligheden starter med at opdage – ’hov, jeg har givet for lave priser og nu skal jeg lige have det her til at hænge sammen’. Man kan aldrig gardere sig imod at nogen kommer til at lave en forkert pris. Det eneste vi kan gøre er at lave udbudsmaterialet så klart som muligt, så det er så klart som muligt, hvad det er man byder på, hvad opgaven indebærer. Så de [tilbudsgiverne] får afsat det rigtige antal timer og ressourceforbrug.”

I citatet fremgår det i overensstemmelse med den konventionelle teori om udlicitering at en tydelig og præcis specifikation af opgaven var central i forhold til en tilbudsgivers prissætning – og dermed efterfølgende allokering af ressourcer. Samtidig blev det også påpeget, at specifikation af de pågældende driftsopgaver dybest set indebar en række dilemmaer:

”Ved tilstandskrav er det meningen, at entreprenøren selv skal tilrettelægge, hvad der skal udføres af aktiviteter hen over året... Det har vi på fornemmelsen at de [entreprenørerne] ikke får regnet rigtigt med ind i tilbuddene... Udførselskrav gør det tydeligt hvad opgaven indebærer at der skal laves, så de [tilbudsgiverne] får sat det rigtige ressourceforbrug på og afsat det rigtige antal timer... Det er et dilemma. Det er en afvejning ved hvert eneste element i udbuddet. Skal man basere det hele på tilstandskrav eller skal man lægge nogle udførselskrav ind?”

I den fagtekniske terminologi inden for sektoren (Juul, Bjerregaard og Dam, 1998) opereres der med henholdsvis ’tilstandskrav’ og ’udførselskrav’, som de to primære metoder til specifikation af ’kvalitet’ i driftsopgaver. Anvendelsen af udførselskrav, hvor blandt andet antallet og indholdet af arbejdsrutiner bliver specificeret (fx angivelse af antallet af græsklipninger i vækstsæsonen samt angivelse af metoder og maskiner til græsklipningen), ville give en større præcision og sammenlignelighed mellem afgivne tilbud, men samtidig også øge risikoen for at det udførte arbejde i selve kontraktforløbet enten var for lidt eller for meget i forhold til ’den nødvendige pleje’ set ud fra et fagprofessionelt synspunkt. Modsat ville anvendelsen af tilstandskrav, hvor acceptable tilstande for et grønt element specificeres (fx angivelse af minimums- og maksimumshøjde for græsset en bestemt type af græsflade), give et mere upræcist grundlag for afgivelse af priser i tilbud, men samtidig en lettere kontrol og mere tilpasningsdygtig drift i forhold til behov set ud fra et fagprofessionelt synspunkt.

I casen fremgik det at vigtigheden af de enkelte transaktionelle dimensioner i et givent kontraktforløb kunne variere i forhold til graden af opfyldelse af de enkelte transaktionelle forudsætninger:

”Hvis vi får en entreprenør, der ikke kan løfte opgaven, eller fra starten af har givet en for billig pris og er presset og derfor hele tiden skal forsøge at springe over, der hvor gærdet er lavest, så er vi nød til at stramme skruen meget, bruge vores kvalitetsbeskrivelse meget, bruge vores kontroller meget. Så bliver det pludselig vigtigt at de [kvalitetsbeskrivelserne] er meget udspecificerede, er meget nøjagtige, entydige. Så skal man hele tiden holde dem [entreprenørerne] op på det.”

Særligt fremgik det, at såfremt at en entreprenørs prissætning og allokeringen af ressourcer var utilstrækkelig, så blev anvendelsen af kontrol og kvalitetsbeskrivelsen vigtigere i kontraktstyringen. Samtidig fremgik det også, at en utilstrækkelig drift ikke nødvendigvis var et spørgsmål om en

forkert ressourceallokering, men også kunne være et spørgsmål om manglende kompetence ('ikke kan løfte opgaven'). I sidste tilfælde skiftede kvalitetsbeskrivelsen funktion fra at være et led i en kontrol af en svigefuld entreprenør til at være et udgangspunkt for læring og udvikling af kompetence i entreprenørens organisation.

Omvendt gav en situation, hvor den økonomiske ramme var tilstrækkelig, anledning til en mindre vægt på anvendelse af kvalitetsbeskrivelsen og kontrol i kontraktstyringen:

”(Omvendt) hvis vi starter ud med et godt samarbejde og nogen der har givet en fornuftig pris, som kan få det til at løbe rundt økonomisk og ikke er presset, så bliver det mindre vigtigt om kvalitetsbeskrivelsen er helt præcis. Så skal vi ikke bruge det værktøj så meget. Så er der ikke brug for at måle med tommestokken.”

I casen var det også tydeligt, at 'tillid' (relationel dimension) til en entreprenør blev etableret i starten af et kontraktforløb på baggrund af et transaktionelt fokus på de løbende kontraktresultater:

”Typisk vil vi bruge det med at kontrollere i det første halve år af entreprisen, indtil vi er tunet ind på hinanden. Når man har kalibreret øjne og fundet ud af at det kører godt, så bliver man ikke ved med at fare bevidstløs rundt, lave en masse kontroller og bruge en masse tid på det. Når tingene er i orden så bliver kvalitetsbeskrivelsen også mindre vigtig.”

I ovenstående citat fremgår det endvidere at den opbyggede tillid medførte at fokus og aktiviteter vedrørende monitorering (transaktionsomkostninger) efterfølgende kunne reduceres. I casen var det også tydeligt at vigtigheden af transaktionelle og relationelle dimensioner skiftede undervejs i et kontraktforløb. I starten af et kontraktforløb var der eksempelvis relativt større fokus på monitorering (kontrol) og overholdelse af specificerede krav til opgaven (kvalitetsbeskrivelsen). I de tilfælde, hvor entreprenøren levede op til kravene i starten af kontraktforløbet, kunne kontraktstyringen skifte fokus og den relative vigtighed af centrale transaktionelle dimensioner blev mindre. Et centralt aspekt, som blev fremhævet ved kontraktforløb med velfungerende transaktionelle dimensioner, var et skift i kontraktstyringen fra et fokus på kontrol af opgavernes udførelse til et fokus på udvikling af og tilpasninger i driften/parkområderne:

”Man begynder jo at snakke om udvikling, hvad man kunne lave af ekstraopgaver, hvordan man kunne lave opgaverne på en anden måde, hvordan man kan optimere opgaven. Det bliver der tid og overskud til når man ikke skal rende og kontrollere hele tiden.”

Endeligt fremgik det i casen at inden for de begrænsede tilrådeværende administrative ressourcer kunne tiden prioriteres forskelligt af de kommunale medarbejdere alt efter behov. I forhold til kontraktstyringen kunne fokus således prioriteres til de transaktionelle styringsmæssige behov, hvor det mest fundamentale var, hvorvidt driften levede op til kontraktgrundlaget. I forlængelse af heraf kan det fremhæves, at velfungerende transaktionelle dimensioner i casen fremstod som er en forudsætning for udvikling af velfungerende relationelle dimensioner. Et vedvarende fokus på kontrol blev dog betragtet som meget negativt af kommunens medarbejdere. Modsat blev etableringen af en relationelt orienteret kontraktstyring med fokus på udveksling af viden, udvikling og tilpasninger betragtet som både positivt – og nødvendigt i forhold til den fortsatte varetagelse af de transaktionelle dimensioner.

8.2.6 Opsummering

Casestudiet viser, at transaktionelle og relationelle dimensioner i den fortløbende kontraktstyring kan betragtes som gensidige forudsætninger der indgår i en helhed. I bredeste forstand kan det siges, at velfungerende transaktionelle dimensioner er en forudsætning for velfungerede relationelle dimensioner og velfungerende relationelle dimensioner er en forudsætning for velfungerende transaktionelle dimensioner. På den ene side var dette eksempelvis udtrykt i casen gennem driftsstyringens behov for samarbejde og kommunikation med entreprenøren for, at få tiltrækkelig med viden og indsigt til at kunne varetage driftsplanlægningsopgaver. På den anden side var det eksempelvis udtrykt gennem nødvendigheden af, at den økonomiske og ressourcemæssige ramme var på plads førend fokus i styring kunne udvikle sig fra at være kontrolorienteret til at være udviklings- og samarbejdsorienteret. I forlængelse heraf viste casen, at relationelle dimensioner ikke nødvendigvis erstatter de transaktionelle dimensioner – dimensionerne fremstår derimod i høj grad som komplementære.

Yderligere belyste casestudiet hvordan dilemmaer, som opstår når udlicitering administreres ud fra et transaktionelt kontraktideal, kan håndteres gennem implementeringen af et relationelt fokus i kontraktstyringen. Et velkendt dilemma er problemet med manglende viden i de centrale

styrings- og planlægningsmæssige funktioner, når organisatoriske funktioner ('strategisk planlægning' og 'operationel drift') separeres gennem implementeringen af udlicitering i en skarp bestiller-udfører model. De relationelle dimensioner i form af samarbejde, personlig kommunikation og udveksling af viden er netop de forudsætninger, der kan håndtere de transaktionelle dilemmaer omkring hvordan den nødvendige viden til driftsplanlægning og driftsstyring tilvejebringes. Endvidere viste casestudiet at kontraktstyringsaktiviteter ikke kun er at betragte som 'transaktionsomkostninger', i form af anvendt tid og ressourcer, men også har produktive funktioner i form af eksempelvis overførsel af viden og læring mellem de involverede organisationer eller skift i styringsfokus fra kontrol til udvikling af driften.

8.3 Five Danish cases of change in contractual arrangements

The following section presents five Danish cases which all explores the individual contracting histories. The cases are summaries of full case-reports (available in Danish). The cases can be read as 'standalone' examples of experiences with contracting out as well as they can be compared in terms of context, contractual arrangements, contracting history and overall lessons learnt.

8.3.1 *The case of Favrskov*

In a Danish context, Favrskov municipality is a 'new' municipality established in 2007 through a merger of 5 small municipalities. In the years following the merger, the key challenges for the park and road services were related to implementing a new organization, integrating and aligning administrative systems and ensuring similar service levels across the municipality. From an early stage, the municipality based its strategy for the reorganization on the objective that the organisation should end up being 'competitive' measured by the means of market tests. Private involvement was in the time after the merger limited to purchases of investment intensive surface road works based on one-year contracts. The involvement was a continuation of former practices in the five earlier municipalities. Key challenges in the strategy encompassed rationalization and alignment of the park and road organization in terms of structure, staff and machinery, physical locations and equipment yards, administrative systems, and service levels and provisions.

After the reorganization was completed, a contract for provision of all park and road services in the municipality for a potentially six year period where tendered in 2012 to the market to test the

competitiveness of the internal organization. An external consultant was involved in important roles for advice, preparation and management of the tender process. The tender took place in the context of severe budget constrain and a clear objective for the organization of the tender was to test whether the market could provide cost reductions. Based on that objective it was decided to tender the whole organization in one contract, potentially allowing for scale economies, minimizing administrative costs and attracting larger and competent firms in the market. Following the initial strategy for park and road services, the tender also included an internal bid with intends to keep services in-house in case of the internal bid would win. The contract was based on well-known sector standards in terms of evaluation criteria (a mix of price and quality), the contract objectives (an ‘input’-based contract in terms of delivery of pre-defined services), specification of terms, payment scheme, service descriptions as well as the roles of the client and contractor.

The tender was won by a private contractor and the immediate economic result was a 20-percent cost reduction compared to earlier spending levels. The internal bid came in second while two other bids from private contractors came in above the internal bid. As a consequence, operational staff was transferred, machinery sold off and physical facilities (equipment yard) was rented to the private contractor. Subsequently, the number of dedicated full-time staff was significantly reduced by the private contractor in a rationalization of the organization dedicated for the contract. After a period, staff was also transferred from public to private employment terms as part of a normalization. The new contractor also embarked on a more intensive and effective use of subcontractors as well as investments in machinery.

Contract management was initially organized as a purchaser-provider relation with clearly separated responsibilities for the two parties. The purchaser-function in the municipality is well-staffed and holds formal responsibilities for overall planning, prioritization and monitoring of maintenance operations. The contractor (provider) holds formal responsibilities for delivery of maintenance operations according to predefined service descriptions. Payments are based on the level of provided services (‘input based’). However, the relationship between the municipality and the contractor developed in a collaborative direction with emphasis on decentralization of decision-making for non-scheduled operations through the ‘invention’ of a new management concept (labelled ‘easy maintenance’), information sharing (in particular on operational priorities and costs), re-investment of savings in service improvements, pursue of social responsibilities (education and training activities) and adjustment of formal service specifications to the actual requirements and conditions of roads and parks.

In terms of institutional dynamics, the Favrskov case represents an example of a strategic and well-prepared ‘critical juncture’, albeit accentuated by immediate financial circumstances, which resulted in a complete displacement of internal provision with private provision. The primary outcome (the complete displacement) was not inevitable due to the overall strategy implemented by the municipality. The longstanding objective was to ensure a competitive organisation of services delivery – not a shift to private delivery as such. The displacement was, for example, not due to some crisis in terms of a severe government failure (note that the internal bid came in second).

Following the critical juncture, the subsequent developmental pathway is observed to take place through informal ‘conversions’ of the standard approach for managing the exchange relation into a relational and collaborative oriented approach. In the conversion process the initial cost-oriented focus was furthermore supplemented with a development focus. However, the exchange relation was still formally governed by a standard approach defined by the terms of the initial contract. In addition, institutional development also took place through small additions to the original contract through ‘layering’. Layering was, for example, observed in the invention of a new concept for decentralizing operational decisions (‘easy maintenance’).

The initial displacement also exhibited a degree of ‘lock in’. Future insourcing seems unlikely in the Favrskov case as long as no severe market failure arises. The ‘lock in’ is sustained by the discontinuation of internal operational capacity in the municipality as well as the private contractors re-structuring and integration of operations within a larger organization. Insourcing would therefore impose increased cost related to (re-)establishment of internal operational capacity anew as well as loss of efficient gains provided by the capacity of the private organisation for effective use of resources within a larger organisation and markets for subcontractors.

8.3.2 *The case of Skive*

Skive municipality is a new municipality established in 2007 by a merger of three smaller municipalities with one larger (and dominant) municipality. The merger implied that park and road services went through a longer process with integration and reorganization of responsibilities for administration and maintenance operations (rather similar to Favrskov).

The municipality employed a differential strategy to the involvement of private contractors within respectively park and road services. The political and strategic motivations for using markets took point of departure in a long-standing aspiration to test the cost levels of in-house provisions

and bring down overall costs. The aspiration was not based on a deliberative attempt to contract out, but has still resulted in increased private involvement over time. In particular, the level of involvement has increased from relatively low levels to medium levels since the merger in 2007 as well as the types of contract implemented in exchange relations have changed and differentiated into several sub-types. The municipality has kept some types of maintenance works in-house, but in the course of the changes more types of maintenance works has been included in the shifts to new contract types. For roads the share of maintenance budgets spend on private involvement has increased from about 40 percent in 2007 to 55 percent in 2015.

Within road services the involvement of private contractors changed from a longstanding use of short term contracting (1 year contracts) for investment intensive services (surface works) into a differential use of a medium term (4 year) road partnering contracts for city zones and long term (15 years) performance contract for rural zones. Skive municipality implemented the performance contract in 2013 and the partnering contract in 2015.

The change in contracts for roads and inclusion of more types of work was spurred by a combination of severe budget constrain in the municipality and immediate requirements for new investments in road surface works to improve road quality and keep the costs for recurrent maintenance services down. The immediate economic result of the change in contracts was a massive reduction in budgeted annual maintenance cost around 50 percent for both contracts. The change in contracts was also a deliberative attempt to adapt contract types to the tasks at hand. Road maintenance in city zones is typically characterized by higher degrees of unforeseen contingencies which are hard to plan for in advance and requiring a degree of flexibility in service provisions and multilateral planning and coordination efforts. Road maintenance in rural zones is, on the other hand, typically characterized by lower degrees of unforeseen contingencies which make unilateral long-term planning and coordination easier. The municipality aligned the content of the two contracts, in terms of the level of coordination, contract duration, service specifications and payment schemes, with task characteristics of respectively maintenance in urban and rural zones. The change was not spurred by internally accumulated experiences, but by experiences accumulated elsewhere. The idea for the change in contract types came from experiences circulated in political and administrative networks as well as the preparation and implementation of the new contracts were carried out by external consultants.

The strategy for provision of park services in Skive Municipality was based on an overall development plan which aimed at continued development of internal capabilities to carry out

maintenance operations. In the strategy, involvement of private contractors was found to be limited and primarily based on a benchmarking strategy based on competitive tendering of standard contracts encompassing limited task portfolios. Prices in external tenders were in the strategy used for comparisons with in-house cost levels and an indicator for internal rationalization potentials. Thus, the strategy ‘locked in’ the contractual arrangement used for provision of park services by confining this to standard contracts with a limited portfolio of services.

In the case of Skive Municipality, the change in contract type for parks has taken place as a displacement of the former standard approach to contracting out with two more refined forms for contracting out (tendency to reliance on hierarchy and markets toward greater reliance on ‘hybridization’). The change was spurred in a critical junction characterized by immediate financial pressures (limited internal budgets for investments) and investment requirements as well as the availability of new contract model available within the organizational field. The displacement would therefore have been unlikely to take place ten years earlier. The long contract duration for one of the contracts, however, indicates a temporary ‘lock-in’ as it would incur high costs (e.g. an outright contract failure) to shift back to a standard approach.

8.3.3 *The case of Holstebro*

Holstebro municipality has contracted out all park and road maintenance services since 2000. Throughout the 1990s, the municipality sought to make their own in-house provider more effective, but a market test in the late 1990s resulted in a complete transfer of the park and road organization to a private contractor. The preparation of the first tender relied heavily on external expertise by involvement of the national road agency as well as a private consultancy. The first contract resulted in a cost saving around 10 percent, but maintenance operations was challenged by poor technical work specifications and a need for the parties to adapt the contract into a workable framework in a municipal context. The challenges partly reflected the overall stage of development of contract and technical standards in the park and road sector. The parties subsequently engaged in collaborative behaviours in order to make the contract workable. The initial managerial approach was in this stage converted from a cost-focused strategy toward a collaborative strategy. Park and road maintenance has since the first contract been tendered every fifth year. Over the years the formal contract has developed substantially by amendments and adjustments for each tender. In particular, additional features have been added to the formal contract. The latest contract is organized as a

framework for close collaboration, service development and citizen involvement besides standard features such as technical work specifications and juridical matters. Thus, the institutional developments have over time resembled dynamics related to both conversion and layering. Conversion dynamics took in particular place under the first contract while layering has characterized the long term development. The development in Holstebro Municipality has also entailed a degree of lock in of contracting out as the overall arrangement for provision of park and road maintenance. After the critical junction in the late 1990s internal capacity for carry out has devolved. The municipal merger in 2007 gave the opportunity to rethink the strategy as the smaller municipalities in the merger had operational expertise organised in-house. However, economic calculations showed that it would be (too) expensive to establish full capacity anew. The role of external experts in terms of involvement of consultant for assistance with drafting and procuring contracts has been diminishing over the years. While external assistance was paramount in the preparation of the first contracts the last contract was prepared and procured without any external assistance.

8.3.4 The case of Solrød

In 2002, Solrød municipality put out their first competitive tender including all park and road services. The tender was won by Solrød municipality's own in-house organization, which resulted in a continued internal organization of the provision of park and road services. Private involvement was mainly limited to investment intensive services (surface works) based on short term contracts for maintenance of roads. Later, and as a consequence of a national municipal reform, Solrød municipality was required in the late 2000s to consider anew potentials for restructuring their provision of park and road services. The municipality firstly considered to reorganize service delivery by establishment of an inter-municipal cooperation together with a larger neighbour municipality (Greve). The consideration was driven by expected prospects for greater scale economics which were expected to provide (greater) efficiency and (lower) spending for both municipalities. The municipalities used substantial resources for analysing how an inter-municipal cooperation could be organized, but ultimately the plan failed in 2012 due to uncertainties and disagreements about the economy and management in an inter-municipal cooperation.

Shortly after the failed plans for an inter-municipal cooperation, Solrød municipality choose to tender anew all its park and road services in a single contract. The procurement strategy was

exceptional in comparison with most other municipal strategies. In particular the tender included both service- and construction tasks, an overall price limit in combination with high emphasis on quality as competition criteria, a decentralized contract structure with a high degree of delegation of managerial responsibilities to the contractor and a monitoring system mainly based on citizen complains. The procurement strategy was also formed part of a new and more lean organization where all operational expertise should be outsourced. The strategy was based on intents to ensuring bids (only) from larger and highly competent contractors, ensuring a contractor's ownership as well as minimizing the municipality's overall administrative costs for contract management. A private consultant was heavily involved in planning the new internal organisational structure, procurement planning, drafting contract materials and executing the procurement process.

In early 2013, a private contractor was handed over the responsibilities for providing all park and road maintenance services for a three-year period with an option for a two-year contract renewal. In terms of cost, Solrød municipality estimated that the contract saved the municipality about 0.5 million DKK annual (equal to about 5 % cost reduction) along with a one-time quality 'boost' worth around 1 million DKK. The economic outcome was evaluated to be a result of the private contractor's more efficient organization model and involvement of a more skilled workforce than the prior in-house organization. The contract included a staff transfer from the in-house organization to the private contractor. The former municipal staff was, however, slowly phased out of the private contractor's workforce due to layoff, resignation or retirement. The layoff of the prior municipality workers was primarily grounded in a lack of skill and inability to adapt to (more demanding) work norms in the private organization.

In the beginning of the contract there were several disagreements between Solrød municipality and the private contractor. The disagreements were the result of various factors; misunderstanding of contract material (quality specifications) on behalf of the municipality, inadequate meeting structure between the parties, lack of local knowledge from the private contractor in order to perform faithfully according to the contract, and an economic control system that created problematic incentives. Through dialogs the two parties managed to make mutual adjustments which solved most of the disagreements and improved their relationship significantly. Overall, the private contractor had a high degree of delegation of responsibilities for planning, operation and monitoring through the whole contract period. The municipality did not have a dedicated staff for contract monitoring (as customary), and where therefore relying on the private

contractor's self-monitoring systems along a yearly progress report where overall assessment of service quality mainly is based on the level of citizen complaints.

In the case of Solrød, an external consultant introduced the formal contract and the new organization of the contractual relation which the parties subsequently needed to learn how to manage in sensible and satisfying ways for both parties. In the process, earlier behaviours congruent with standard approaches had to be abandoned and new behaviours were institutionalized through a mutual learning process in the contractual relation. In this process, transferred staff was also excluded due to inabilities to adapt to norms and requirement in the new private organization as well as requirements for carry out work under the new contract. Overall the Solrød case represents an example of emergence and to some degree a case of displacement.

8.3.5 *The case of Roskilde*

In the case of Roskilde Municipality, a limited range of services has been re-currently contracted out since the 1995. Small portfolios of services have been put out in open tenders to the market based on standard contracts. All tenders have been open for bids from the in-house provider as well as private contractors. One result is that provision of small portfolios of services has shifted several times over the years between internal and external provision. The market tests have been used to benchmark the economic performance of the in-house provider and set internal prices and calculating internal budgets. The strategy has in combination with deliberative restructuring efforts contributed to ensuring a competitive in-house organization. By 2015, the organization of the internal service provider was based on financial and managerial principles very similar to private organizations.

In the case, a relatively stable pattern has been maintained over the years. The case represents a case of 'lock-in' of the overall arrangements for organizing contractual relations and reliance on mixed service delivery. The stable pattern has been reinforced by the development of a steadily more efficient in-house provider organization which legitimacy and political support is upheld by continued successful market tests. In this strategy, attracting bids from private contractors at a certain economic level is necessary in order to provide credible market tests.

8.3.6 Contract development across the cases

The five cases represent a set of different pathways in the development of contractual arrangements. Across the cases more radical and more incremental approaches could be identified in the development. More radical forms for change were in particular found to be located outside contractual relations whereas more incremental changes or stable patterns were found to be located both outside and inside contractual relations.

Table 84.
Change as a result of location of change and contract history.

Contract history	Location of institutional change	
	Outside contractual relations	Inside contractual relations
First contract	<i>Radical change</i>	<i>Incremental change</i>
Subsequent contracts	<i>Radical change, Incremental change or stable patterns</i>	<i>Incremental change or stable patterns</i>

Note: Table summarizing observed change patterns in five cases according to location of change and contract history.

All cases represent examples of municipalities which aimed to explore prospects for gaining cost-efficiencies at an initial stage by introducing competitive tendering as well as cases where private contractors has become involved in service delivery. At a basic level all cases represent cases of critical junctures with shifts from internal provision with external provision. This is trivial due to the selection criteria of the five cases in the study. It should be noted that several instances of market tests with subsequent annulation of tenders and continuation of internal production can be identified among Danish municipalities. However, less trivial in the five cases is a differentiation between different types of shifts. In Skive Municipality the shift took place *gradually* while in the cases of Holstebro, Favrskov and Solrød Municipalities the shift took place as *wholesale* shifts. The case of Roskilde Municipality represents a more stable case of an early and *partial* shift and a subsequent ‘lock-in’ of the mix between internal and external provision. The case of Skive regarding park services resembles a similar partial shift. In terms of potential ‘lock-in’ where a municipality becomes dependent on one particular type of service provision, all wholesale shifts also represent situations where reliance on contracting out has become fully locked-in. However, the case of Roskilde represents a case of lock-in where the continued legitimacy and efficiency of

internal delivery requires the use of external delivery (to prove competitiveness of internal organisation).

Of further interest is the observation that in all cases (except Roskilde and partially Skive), attempts to restructure internal or inter-municipal organizational forms were deliberately tried out before the possibility for private contractors to become involved at a larger scale was realized.

All critical junctions leading to establishment of contractual relations with private service providers can also be observed subsequently to involve a degree of learning and incremental adaptation to a new logic of managing services. The case of Solrød Municipality represent the clearest example of learning and adaptation where the parties subsequent the decision to contract out needed to 'learn by doing' what the contract was all about before a more stable patterns for interaction were established.

The cases also represent different kind of experiences at different 'ages of contacting histories'. The case of Solrød municipality, for example, tells the story on the initial challenges with implementing a new contract type and a new organization. The case of Holstebro municipality, as a contrasting example, tells the story of how contractual arrangements have developed and still develops over a fifhtteen-years period.

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