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Instruments, approaches and arrangements

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Contracting-out in urban green-space management: Instruments, approaches and arrangements

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Abstract

Although contracting-out has become widespread among the OECD countries in the last couple of decades, there is limited knowledge about the arrangements chosen by urban green-space managers when contracting-out. In this paper, I take our current knowledge a step forward and present a comprehensive overview of the ‘infrastructure’ of contract designs used for contracting-out in urban green-space management. On the backdrop of a cross-national sample of a total of 14 cases from four countries, I build up a ‘toolbox’ of instruments, approaches and arrangements currently used by public clients for managing contracts with private contractors. In six major categories of instrument, I distinguish 41 specific instruments, and 15 embedded approaches for managing these instruments. Both instruments and approaches are grouped into standard and advanced kinds. Arrangements are categorized into three major types. Each type is characterized by a core combination of instruments and approaches and a limited range of variants. Finally, I explore national differences and organizational reasons supporting and directing the choice of overall contractual arrangement. For both the practitioner and the researcher, the paper can be used to inspect, compare, design and develop instruments, approaches and arrangements available in the toolbox of urban green-space management.

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Keywords: Case study; Contract design and management; Grounds maintenance; Public service contracting; Urban green-space management

Introduction

Concurrent with changes in management of public spaces (Carmona et al., 2008; de Magalhães and Carmona, 2009), the organization of urban green-space management has changed profoundly in recent decades. Congruent with the ‘market and management’ inspired transformation of public sectors in the OECD countries in the 1980s and 1990s (Kettl, 2000), former hierarchies based on professional expertise have been dismantled

and management based on contractual frameworks and market mechanisms has become widespread in urban green-space management (Persson, 1996; Lindholst, 2008b; Nuppenau, 2009). In the 1980s, the standard arrangement for contracting-out became envisaged as a framework for competitive pricing (Walsh, 1995; Domberger and Jensen, 1997; Boyne, 1998a) with emphasis on the four tenets of specification, pricing, monitoring, and enforcement of service delivery. Congruently, the ideal role of the public client was defined as a ‘smart buyer’ (Kettl, 1993) who needed to know what to buy (i.e. specification of service provisions), who to buy from (i.e. pricing of service provisions), and finally,

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what has been bought (i.e. monitoring of service provisions). For urban green-space management, grounds maintenance became a part of the leading edge in the contracting-out exercise (Patterson and Pinch, 1995; Persson, 1996). In well-managed cases this has – within limits – resulted in noteworthy efficiency gains (Lindholst, 2008a). With the introduction of partnership ideas since the late 1990s (Bovaird, 2004, 2006; Hodge and Greve, 2007), still more alternatives for contracting-out have become viable for public managers. The partnership idea has implied a focus on integrating the state, the market, and the local community in public space management (de Magalhães and Carmona, 2009) and for urban green-space management in particular (Randrup et al., 2006; Lindholst, 2008b), the partnership idea has implied recommendations for integrating into the frameworks used for contracting-out aspects such as budgets for capital investments, strategy, park policy, citizen involvement, action and development plans, incentive schemes, collaborative styles of management, active conflict management, and joint planning. The promised range of benefits associated with the partnership idea includes involvement of local communities, access to new sources of finance for investments, efficient use of available resources, improved development of green spaces and a clearer focus on delivering value for all stakeholders.

Despite the widespread use of contracting-out in urban green-space management and the introduction of alternatives, there has been no systematic review of how contracting-out is applied in urban green-space management. An early study by Persson (1996) provided comprehensive coverage of variations in contract designs used when contracting-out grounds maintenance in Sweden at a time where policy guidance was limited to standard arrangements. Similar partial perspectives for a contemporary overview are provided in two more recent studies by Randrup et al. (2006) and Lindholst (2008a). Both studies were made in specific organizational contexts with the intention (although to different degrees) of improving and developing practice. In the first, an explicit partnership approach was proposed as a promising part of the future, while the second highlighted the relevance of introducing principles of relational governance for driving the managerial effectiveness of contracting-out in urban green-space management further. In a heuristic perspective, such prescriptive approaches may inform and sustain specific attempts to develop practice elsewhere, but they do not inform the reader about the full range of possibilities. Furthermore, due to the onset of challenges identified in specific organizational contexts, such attempts may contain a degree of bias if generalized beyond what is analytically warranted.

In this paper, I address the contemporary deficit by providing an overview on the ‘contractual infrastruc-

ture’ by identifying, describing, comparing, and discussing ‘instruments’, ‘embedded approaches’ (for managing instruments), and ‘arrangements’ (typical combinations of instruments and approaches) observed in use for managing contracts between public clients and private contractors in urban green-space management. By the concept of ‘infrastructure’ and its three constituencies of instruments, approaches and arrangements, I make reference to social structures and practices through which urban green-space management may implement and sustain objectives and receive value from a contractual relationship. I furthermore briefly explore national differences and organizational reasons supporting and directing the choice of overall contractual arrangement. Both the urban green-space manager and the practice-oriented researcher can use the paper to inspect, compare, design and develop the current toolbox for contracting-out in urban green-space management. The outline of the paper is as follows: ‘Material and methods’ section describes how the empirical material was sampled and analysed. ‘Results’ section presents and discusses the instruments, approaches, and arrangements available in the toolbox. ‘Discussion’ section explores national differences and the organizational reasoning behind the choice of arrangement. The last section, ‘Conclusion’, puts the paper’s findings into perspective and highlights a final suggestion for future research.

Material and methods

The empirical data consist of material collected in 2005–2007 from 14 cases of urban green-space management engaged in contracting-out various responsibilities, which included parts of finance, policy, planning, development, management and/or maintenance for a diverse set of urban green spaces. The green spaces managed by contract included various kinds of parks and gardens, botanical gardens, waters, road sides, urban trees and woods, play grounds, sports fields, and cemeteries.

Through the qualitative technique of theoretical sampling (Ragin, 1994), the cases were selected purposefully to represent the widest possible range of contract designs, i.e. a criterion of diversity was applied. It should be noted that this sampling strategy allows no direct inferences about the prevalence or distribution of various instruments in urban green-space management. The sampling strategy was theoretically informed by the categorization of contracts put forward by Macneil (1974, 1980, 2000b). Macneil’s categorization enabled an analytical elaboration of contract designs on a continuum ranging from a ‘transactional’ to a ‘relational’ pole. A transactional contract design is based on

norms (and institutions) supporting a highly specified exchange of services, while a relational contract design is based on norms (and institutions) sustaining the relationship that embeds exchanges. Between the two poles, options may be identified that involve the two sets of norms (and institutions) in various degrees (Vincent-Jones, 2000). In public service contracting, the standard approach embedded in early 'market and management' styles of reform was typically associated with the transactional type, whereas, partnership and collaborative approaches embedded in recent reforms has typically been associated with the relational type (Lian and Laing, 2004). The level of management experience and a history of contracting-out were applied as a secondary criterion. This criterion was supplementary to the diversity criterion to ensure that the material was based on relatively qualified management experience. However, due to the novelty of some types of contractual arrangement (e.g., partnership-based contracts) some cases were included even though management experience or the history of contracting-out was limited.

A minimum of two cases (paired to comply with the diversity criterion) were selected from each of four different national contexts. The cases were selected in Denmark (6), New Zealand (2), Sweden (2), and the UK (4). An initially higher number of potential cases was reduced to the current 14 due to unwillingness to participate. National experts were used to help identify and qualify specific cases. These came from the Commission for the Built Environment (CABE) in the United Kingdom, the Swedish University of Agricultural Sciences, the Centre for Forests and Landscape, University of Copenhagen in Denmark, and UNITEC in New Zealand. The researcher's home in Denmark and a prolonged stay in the UK explain the higher numbers of cases from Denmark and the UK. In the many 'houses' of public management reform in the OECD countries (Pollitt and Bouckaert, 2004), these four countries represent an informed mix of forerunners/latecomers, centralized/decentralized, and technocratic/pragmatic/ideological approaches to the implementation of market-based reforms and policies for contracting-out (see Patterson and Pinch, 1995; Massey, 1997; Boyne, 1999; Scott, 2001; Christensen and Lægred, 2002, 2007; Bryntse and Greve, 2003). In a comparison based on the literature referred to above, New Zealand represents a relatively centralized and technocratic approach, the UK represents a relatively centralized and ideological approach, while Denmark and Sweden represent relatively decentralized and pragmatic approaches, with Sweden as the Scandinavian forerunner and Denmark as slightly more ideologically informed in initial reform initiatives. The UK and New Zealand are generally acknowledged as forerunners in the implementation of market-based reforms, whereas Sweden

and Denmark represent welfare states with relatively large public sectors and a historical reliance on in-house arrangements for service provisions. The inclusion of a mix of the various approaches helped minimize the risk of a systematic bias in the empirical material stemming from institutional and/or historical limitations and/or dependencies in each national context. In each case, the contract(s) and the management hereof were sought reviewed through research interviews and conversations with key members of organizations, field observations, site visits, and document analysis. Due to the various constraints and limitations on collecting the empirical material (e.g., differences in access to members of organizations or documents) the 14 cases do not contain enough information to establish causal inferences through comparative methods (Ragin, 1991, 1994). For example, it would have been highly relevant to infer which instruments, approaches, and/or arrangements provided the best comparative value/performance for urban green-space managers. Nevertheless, the material was sufficient to address the deficit mentioned in the Introduction of the paper and to investigate the individual reasons for contractual choice in each case. The categorization of instruments into types was initially guided by a review of the literature (which is referred to throughout the paper). Through the subsequent analysis, several categories in the literature emerged as useful for structuring the material observed into various types of instruments. In the analysis, specific features (instruments, approaches, arrangement context and reasoning) for each case were listed in a spreadsheet and compared. The overall aim of the analysis was to provide an accessible, but still comprehensive overview on the material.

Results

The 41 instruments identified are summarized in Table 1. The instruments are categorized in six major types where each type serves a specific purpose in contract management. Aligned with the six major types, Table 2 lists 15 embedded approaches for managing the instruments. Across the six major types, instruments and approaches are grouped into standard and advanced types. Derived from this material, Table 3 at the end of the Results section sums up three types of typical arrangements. Each arrangement contains a specific core combination of instruments. Type I is the standard arrangement, while Types II and III are two different versions of partnership-based contracting. However, variants of the standard approach could resemble Type II arrangements through the inclusion of additional instruments. The instruments, approaches and arrangements listed can be viewed as the current

Table 1. Forty-one instruments in the urban green-space manager's toolbox for contracting-out.

Type	Instruments	Examples
<i>Service specification</i>	• Performance-based	• E.g., 'Rough grass areas: height in summer min. 75 mm max. 100 mm'
	• Instruction-based	• E.g., 'Use fungicides one time per year'
	• Function-based	• E.g., 'All high amenity lawns will have a lush green tight sward'
	• Visual material	• Photos (e.g., elements or groups of elements) and/or maps (e.g., GIS generated)
	• Policy	• Overarching document integrating all levels of urban green-space management
	• Strategies	• E.g., How to integrate local community in planning & management decisions
	• Service objectives	• E.g., community involvement, increased work safety, rationalizations, received awards (e.g., green flag), performance targets
<i>Pricing / payment</i>	• Action plans	• Plans specifying functions, activities, and future development of a green-space
	• Unit price	• Unit price for maintenance of 5000 m ² grass turf
	• Total contract sum	• Specification of a min/max annual payment
	• Performance pay	• Payments regulated by observed performance (i.e. linked to results of monitoring)
<i>Monitoring</i>	• Salary	• Pay for work hours.
	• Spot inspection	• E.g., client's random or purposeful visits to specific sites
	• Joint inspection	• Client and contractor visiting site together
	• Internal monitoring	• Contractor's internal system for quality monitoring
	• Customer complaints	• E.g., number of annual complaints
	• Customer survey	• E.g., Number of residents using green-spaces or satisfaction with green-space services
	• Evaluation reports	• Yearly assessment of overall performance
<i>Safeguards</i>	• Statistical sampling	• Systematic control based on statistical samples techniques (i.e. random selection)
	• Rectification notes	• Issued for failure to meet technical specification with the purposes to bring work up to specified standards (administrative fees may be included)
	• Default notes	• Issued in the case of failure to meet a rectification note (penalty included)
	• Retention	• Withholding of 2% of monthly payments in case of missing rectification
	• Liquidated damage	• Payments for cost of damages due to omissions/defaults in work
	• Contract termination	• Rights to terminate the contract in the case of severe breach of contract terms.
	• Pre-qualification	• Exclusion of contractors from procurement processes
<i>Adjustment</i>	• Pro-active dispute resolution	• Resolution ladder or internal arbitration
	• Regulation of total works	• ± 15% of annual contract sum without renegotiation of price
	• Additional works (fixed unit price)	• The client can order additional works if needed to a fixed unit price
	• Indexation	• E.g., price regulation based on an industry-based index
	• Contract length	• Regulate the length (ex ante or ex post) to maximize investments
	• Contract size	• Regulate the amount of work to fit the market
	• Incentives for rationalization	• 50/50 split of savings from rationalization of service provisions
	• Open books	• Sharing of information on costs and budgets
	• Additional works (dedicated sum)	• Dedicated sums for continuous investments
	• Investment plan	• E.g., upfront dedication of finance for refurbishment
<i>Organization</i>	• Scheduled meetings	• Recurrent meetings on day-to-day progress in the contract
	• Supervision	• The client supervises the contractor's staff
	• Joint activities	• Joint planning, workshops, study tours, technical courses
	• Partnership agreement	• Agreement based on common goals, joint activities and economic incentives
	• Shared organization	• Sharing of physical facilities
	• Stakeholder involvement	• Consultation with friends groups

The table provides an overview on the six major types of instruments in the contract manager's toolbox. Although all instruments are subsumed under one major type, some instruments had more than one purpose or the purpose changed according to the overall logic of the contract design. The instruments in grey areas were 'standard' instruments, while the instruments in white areas were advanced instruments mainly used in advanced contractual arrangements.

Table 2. Fifteen embedded management approaches in the toolbox for contracting-out in urban green-space management.

Instrument type	Approach	Description / examples
<i>Specification</i>	• Quantitative	• Transactional focus, one-dimensional value, horticultural work
	• Qualitative	• Relational focus, multi-dimensional value, public service
<i>Pricing/payment</i>	• Static	• Fixed pay for pre-defined services/works
	• Dynamic	• Performance pay
<i>Monitoring</i>	• Atomistic	• Focus on individual elements, correspondence with technical work specification
	• Holistic	• Focus on overall impression, fulfilment of purpose
<i>Safeguards</i>	• Credibility	• Protect the contract from major breaches
	• Attenuating performance	• Regulate attention and behaviour.
	• Active conflict resolution	• Incentives for early conflict resolution
<i>Adjustments</i>	• Unilateral	• Client regulate amount of work
	• Independent	• Automatic regulation of contract parameters (e.g., prices)
	• Mutual	• Negotiated adjustments/joint planning
<i>Organization</i>	• Centralized	• Client has full discretion about service provisions
	• Decentralized	• Contractor is allocated with higher degrees of discretion about service provisions
	• Integrated	• Shared responsibility for decision-making

The table provides an overview of various embedded management approaches identified for each instrument type. The embedded approaches in grey areas were mainly used in 'standard' arrangements, while the approaches in white areas were mainly adopted in advanced arrangements. The approaches for each type were combined e.g., a contract could include both fixed payments for and payments linked to performance or the organization could be more or less centralized and/or integrated.

'toolbox-in-use' for contracting-out in urban green-space management. Each instrument category is individually presented and discussed below. The discussion also briefly deals with cross-cutting issues, because the various categories are interrelated and the function of individual instruments can be viewed from various perspectives; e.g., while 'default notes' are subsumed under safeguards, they can also be analysed vis-à-vis the consequences for the pricing of a contract. The combinational possibilities exceed the scope of this paper and these parts of the discussion serve only illustrative purposes.

It should be noted that some instruments were difficult to categorize unambiguously. Contract duration and size are illustrative examples of this difficulty. Contract duration could be used by clients either ex ante or ex post to adapt the contract to various planning purposes. More advanced contractual arrangements require longer duration for development of acquaintance with the setup and longer contract durations constitute an ex ante signal of commitment (e.g., stimulating investment). Contract duration could equally be adjusted ex post to prolong the duration to reward commitment and/or to continue a well-performing relationship. Options such as an increase in work or contract size, or prolonging/shortening of the duration could equally be seen as a way of safeguarding the contract or as a way of allowing the client to adjust the

contract according to unforeseen needs. Adjusting contract size, or breaking down a contract into subcontracts, was similarly used to adjust the scale of work to the capabilities of contractors/bidders (e.g., to maximize competition). However, in Table 1, contract duration and size have been grouped in the adjustment category because in general they provide flexibility for supporting multiple needs. These observations illustrate what was also true for other instruments; the nature of an instrument could change according to the shifting needs in contract management.

Service specification

Specified exchange is at the heart of contractual relationships (Macneil, 1980) and accurate specification of services is seen as a basic requirement for successful public service contracting (O'Flynn and Alford, 2008). The service specification relates to questions of the 'what', 'when', 'where', and 'how' of the contract. In the sample, the types of service specification ranged from highly measurable in quantitative terms (i.e. capable of be expressed in numbers) to specifications utilizing more qualitative descriptions. The quantitative approach was based on combinations of instruction (how to carry out a given task) and performance (the results of carrying out a given task) – measurements specified in technical

terms. The total amount of work was typically specified in ‘work schedules’ or similar documents. This type of specification could be more or less elaborated with additional visual material (e.g., maps or photos) and short descriptions of functions and purposes of individual green elements (using phrases such as ‘lush’ or ‘beautiful’). Horticultural work was at the core of this type which gave a one-dimensional perspective on value in the exchange relationship. This type of service specification corresponds by and large with the requirements in the standard approach for contracting-out public services.

At the other end, a range of advanced instruments were identified. These were typically embedded in a larger strategic framework consisting of instruments such as policies, broadly defined service objectives, or action plans. In these cases, the specification envisioned horticultural work and urban green spaces as means which serve to fulfil a range of service objectives and needs related to a broader community or range of stakeholders, i.e. the specification embedded a multi-dimensional perspective on values. In these cases, the contractor could be assigned a higher degree of discretion about what horticultural standards (or quantities) would bring about the most efficient way(s) of achieving compliance with overall policies and service objectives. Two cases relied solely on advanced specification instruments to specify the content of the contract. In the sample, the standard and advanced specification instruments were mostly observed combined in various constellations into more or less complex setups.

Pricing and payments

A long-standing objective in the exercise of public service contracting has been to bring down cost levels (Boyne, 1998b; Hodge, 2000). Pricing is central and competitive pricing through public procurement procedures is commonly used as the basis upon which contracts are awarded. A prerequisite for effective use of competitive pricing is measurable and accurate specification by which a contractor can effectively calculate his profits/costs in performing the contract. Inaccurate specifications or risk shifting may impede the effectiveness of competitive pricing (Romzek and Johnston, 2002). For the three countries regulated by EU Legislation (i.e. European Commission, 2004), the ‘economically most advantageous offer’ defined a range of alternative competitive selection criteria focusing on improving the overall value of the contract for the client side. While in cases of standard contracting both criteria could be observed, all cases of partnership-contracting used the economically most advantageous offer as award criteria.

In standard arrangements, the clients’ main contractual obligation was punctual payment for services provided in accordance with the contract’s payment schedule (but the client could also be obliged to provide the contractor with information, machinery, physical facilities, or entertain social, and professional activities). The sample revealed payment instruments ranging from standard payments based on one instrument to more advanced setups combining various instruments. The standard was based on unit prices multiplied by quantities (e.g., frequency and number of units). The total pricing and payment were calculated by the sum of all quantities (e.g., in documents such as bill of quantities). This form of payment was coherent with the provision of grounds maintenance based on standard specifications. In the sample, quantities were commonly calculated on the basis of work planned, included in work schedules and extra jobs issued on the request of the client. Only one case did not include the standard instrument for pricing and payment. In this case, payments were based on a fixed number of working hours. In more advanced contract designs the standard instrument was supplemented by other instruments such as performance pay, open book accountancy, or incentive schemes. So, two distinct approaches could be identified. The first approach managed pricing/payments in a static manner where payments were relatively independent of performance, whereas the second approach managed payments in a dynamic manner where payments were relatively more dependent on performance. As an example of the dynamic approach, performance pay was observed in two versions. In the first version, performance pay was linked to the extrapolation of monitoring results based on statistical sampling techniques, while in the second version performance pay was fully integrated as a part of a performance management scheme. In the former version performance pay was ‘automated’ based on a norm of objectivity, while in the latter it was based on a norm of subjectivity through an evaluation based on an ongoing dialogue between client and contractor.

Monitoring

In the economic strand of principal-agency theory, monitoring (and subsequent enforcement) is perceived as essential to ensure an agent’s (i.e. a contractor’s) performance in accordance with the principal’s (i.e. the client’s) interests (Jensen and Meckling, 1976; Fama and Jensen, 1983). Just as measurable specifications are a prerequisite for competitive pricing, they are equally a prerequisite for effective use of monitoring instruments in public service contracting (Domberger and Jensen, 1997; Hart et al., 1997).

The sample revealed a diverse set of monitoring instruments. The standard monitoring instruments related to correspondence between technical specifications (intended performance) and measured quality of horticultural works (observed performance). The standard setup included monitoring instruments such as spot inspections (random or systemized), joint inspections, and (documentation for) internal quality systems. Advanced monitoring instruments included statistical techniques based on random sampling, customer feedbacks, and annual (or biannual) evaluation reports. Advanced instruments also included evaluations of societal and ecological outcomes of contractual performance (e.g., customer satisfaction, no. of community partnerships, visible improvements or achievement of high standard rewards). Information about the overall value/outcome of performance therefore became integrated into contract management.

The embedded approaches for monitoring were based on what I identified as either ‘atomistic’ or ‘holistic’ approaches. The atomistic approach took intended and observed performance of demarcated individual elements in the urban green space as defined in the service specification (e.g., trees, grass, hedges) as the main focus for monitoring. The holistic approach took the overall impression of a group of elements or the whole green space as the main focus for monitoring. In the holistic approach, deviations in measurements for individual elements were allowed as long as the overall state of the green space was perceived as acceptable.

‘Safeguards’

With the ever-present risk of opportunistic behaviour, i.e. seeking self-interest with guile, it becomes paramount to ‘safeguard’ the contract from such behaviour (Williamson, 1985). In the sample, the instruments for safeguarding the contract ranged from the kind designed to address minor events of non-compliance to those designed to address major contract breaches. The range of formal instruments included default and rectification notes to support day-to-day management and more severe safeguards, such as liquidated damage, arbitration/litigation, and outright contract termination as a last exit option. These safeguards were designed to take action within the duration of the contract, but the use of pre-qualification in the procurement phase gives clients *ex ante* access to exclude incapable or opportunistic contractors (with observable records of poor performance). Congruous with the observation that parties to a contract do not engage with expectations of ending up in court (Coulson, 1998), the inclusion of more severe safeguards was seen mainly as an instrument for installing ‘credibility’ into the contract. These safeguards were not expected to be called into action in the

normal case. Safeguards for day-to-day management served mostly to call attention to minor instances of poor or unacceptable performance and subsequently regulate the contractor’s focus and behaviour accordingly.

In advanced setups, safeguards were typically organized to handle issues and conflict through an escalation of sanctions. More or less elaborate types of formal escalation systems were observed in the sample. The key principle in the observed escalation systems was to solve issues at the lowest organizational level possible and, if unsuccessful, solve issues at higher organizational levels. In this way hierarchy was used as incentive for staff at lower organizational levels to prioritize and handle issues in a timely manner. Escalation was also supported by economic means such as increases in economic penalties e.g., payments of additional administrative fees if issues could not be handled within pre-defined timeframes.

Furthermore, a series of ‘informal’ safeguards were identified. These were constituted through alternative uses of other instrument types, by which the client could direct the behaviour of the contractor. To some extent, this was done by more or less explicit threats (i.e. power). Informal safeguards, included dropping planned work or exclusion from future procurements, but could also comprise tighter schedules for monitoring or more rigid interpretation of technical specifications.

Adjustment

An entirely transactional contract (i.e. the basic logic underlying the standard arrangement) seeks to specify the transactions in question in ‘complete’ terms, i.e. the ‘what’, ‘where’, ‘when’, and ‘how’ are completely determined once a contract is created. As the deal is fully determined in advance, the parties are – in theory – able separately to plan, make investments, and execute the deal in the most efficient way. In practice, a range of issues related to cognitive and communicative differences and the persistence of contingencies render transactional contracting ineffective, i.e. the values given and received in the contract may not correspond with expected values. In general, virtually all real-life contracts are inherently ‘incomplete’ (see Macneil, 1980; Macneil, 2000a, 2000b). Cognitive and communicative differences may differ in accordance with the overall relational properties given by the identities of the client and the contractor (e.g., due to educational and/or professional background) or constraints in available time and resources and/or differences in levels of competence. Contingencies are particularly pervasive in urban green-space management given the inherent dynamic characteristics of urban green spaces as ecologically and socially constituted entities. To address

and maintain efficiency in the exchange, a number of adjustment instruments may be defined in the contract. In addition to the specification of the 'what', 'where', 'when', and 'how', a 'complete' contract ideally specifies the parties' obligations for all contingencies that can be foreseen. A range of instruments are identified which serve to address commonly known contingencies. This includes specification of the consequences if the amount of work should change. This approach ex ante distributes risks arising from change external to the contractual relation. The inclusion of rights for the client to adjust the contract unilaterally imposes additional risks upon the contractor. Indexation of unit prices is another example of an adjustment instrument. In the case of indexation, contingencies are regulated automatically and mitigate contractual risks for both parties. Under an assumption of rational economic decision-making, inclusion of accurate indexes should reduce the ex ante price of the contract.

The condition of incomplete contracting requires clients to maintain the effectiveness of the contract, not only through the co-ordination of actions defined by rights and duties in the contract, but also through engagement in co-operation to handle and solve unforeseen problems. The inclusion of dedicated sums for unspecified work in the contractual period is another example of how the condition of incomplete contracting can be handled. In some cases, the contract included upfront capital investments in order to utilize the expertise and skills of the contractor and maximize the value (or minimize costs) from the contract within a longer time perspective, including assessment of re-vamping versus maintaining a green space. Open books, i.e. the principle of sharing information about budgets and costs, were seen as one of the most advanced instruments used for adjusting the provision of services. By sharing information, the parties could optimize the total value of the contract through adjustment of specific activities, i.e. optimize the value/cost of the contract. The alternative, the client's unilateral adjustment of activities, would potentially have more costly consequences for the contractor, or miss opportunities to make less costly adjustments that could contribute the same value for the client.

The sample revealed three approaches for adjusting service provisions. A unilateral approach located the right to make decisions about adjustments in the hands of the client. This meant that the risk associated with adjustment became unevenly distributed between the parties. Formally, the risk was allocated to the contractor, who in turn was expected to calculate for the risk in the ex ante pricing of the contract. However, in practice the parties ran the risk of signing underpriced contracts, which were subsequently under-resourced, which made it difficult to achieve compliance with specified services. Contracts based on lowest price as the

award criterion were reported by managers to be especially prone to this dynamic. The second approach relied on automatic or 'independent' adjustment. This approach either shared or reduced the risk. The third approach was based on mutual or 'negotiated' adjustments. This allowed the parties to identify and calculate the least costly alternatives for an adjustment. The three approaches were observed to co-exist in various combinations. The unilateral and independent approaches were included in all cases, whereas mutual approaches were found only in more advanced contractual arrangements.

Organization

Scheduled meetings with a fixed agenda related to day-to-day performance were included in both standard contracts and more advanced contracts. In some cases of standard contracting, scheduled meetings were replaced by informal ad hoc interaction and communication. The frequency of meetings varied from monthly or bi-monthly to once or twice a year, with a clear tendency for advanced contract designs to involve a higher degree of both formal and informal interaction.

In the sample, higher levels of organization included partnership agreements, joint planning, joint professional and social activities, such as workshops and training courses for managers and/or ground staff. Through these instruments, the client and contractor could become more organizationally integrated as both parties were involved in decision-making processes. Formal involvement of external stakeholders as part of the contractor's responsibilities was also observed in two cases. Both cases comprised a partnership arrangement where policy and planning responsibilities were shared. This meant that the contractor was expected proactively to interact with both formal and informal groups in the local community. In none of the standard arrangements observed were the contractors expected to interact with park visitors besides in limited roles such as 'carriers of information' or 'ambassadors'. Three distinct approaches to the organization of decision-making could be identified in the sample: a centralized approach where responsibilities were kept in the hands of the client; a decentralized approach where responsibilities were allocated more or less fully to the contractor; and an integrated approach where both parties shared responsibilities for, or participated in, decision-making.

Arrangements

Based on the various combinations of instruments (and embedded approaches) in the 14 cases, three types of typical arrangements could be identified. The arrangements are listed in Table 3. Each type included

a core setup and some minor variations. The core setup included a common group of instruments.

The number of adjustment instruments for all arrangement types is intriguing – especially with regard to Type I. In the existing literature on public service contracting, the model for standard contracting does not draw much attention to adjustment needs in the contractual period. This may be attributed to the fact that the theoretical conception of the kinds of services seen as suitable for contracting-out through standard contracting does not correspond with the typical service characteristics of urban green-space management. If this is true, it can be concluded that the model for standard contracting defined in the existing literature does not correspond directly with the requirements of a standard arrangement for contracting-out in urban green-space management. Based on the material presented in this paper, the standard in urban green-space management has seemingly been fitted with additional instruments to cope with contingencies and/or cognitive and communicative differences.

When compared, Types I and II arrangements demonstrated major differences in the range of instruments included for specification, pricing/payment, adjustment, monitoring, and organization. Only the level of safeguards was by and large the same. It is worth noting, however, that the level of organization differed greatly. In variations of Type I, the contractual arrangement could include instruments and approaches from Types II and III that virtually turned the arrangement into a kind of ‘informal’ partnership or ‘working’ partnership (without any formal references to anything like a partnership agreement). The Type III arrangement was almost in perfect opposition to the Type I. While the Type I arrangement focused on the exchange of services (transactional aspects), the Type III arrangement focused on the framework enabling the exchange of services (relational aspects). It should be noted that the Type III arrangement was derived from two cases only, which makes it difficult to assess which case is the core type and which is a variant. Type II arrangements contained an infrastructure consisting of both transactional and relational aspects, and are therefore the most demanding and complex arrangements to set up and manage. In sum, this overview of the arrangements indicates a continuum with variations organized around the major types. If we also include the various approaches highlighted in Table 2, we find that the core features of Type I are ideally associated with quantitative, static, atomistic, passive conflict resolution, separate planning, and centralized approaches in contract management, whereas the core features of Types II and III arrangements are ideally associated with qualitative, dynamic, holistic, active conflict resolution, joint planning, and decentralized approaches.

Table 3. Three typical arrangements for contracting-out in urban green-space management.

Instrument type	Arrangement type		
	I	II	III
<i>Specification</i>	SS (+A)	SS AA	(+S) AA
<i>Pricing/payment</i>	SS (+A)	SS AA	(+S) A
<i>Monitoring</i>	SS (+A)	SS AA	(+S) A
<i>Safeguards</i>	SS (+A)	S(-S) AA	S A
<i>Adjustments</i>	SS (+A)	SS A(+A)	A(+A)
<i>Organization</i>	SS (+A)	SS AA	(+S) A(-A)
No. of cases	7	5	2

The table illustrates the choice of instruments in three typical arrangements in the sample. S = standard instruments, A = advanced instruments. One symbol denotes that only some instruments in the specific type were used, two symbols denote that virtual all instruments in the type were used. The symbols in brackets illustrate typical variations for the arrangement and whether this variation was typically included (+) or excluded (-). Type I corresponds to standard contracting. The inclusion of all variations in instrument types in Type I illustrates an informal partnership arrangement. Types II and III characterize two distinct approaches to partnership contracting.

The continuum from Type I toward Types II and III arrangements may finally be viewed as an increased integration of contract management with processes associated with the general governance and management of public spaces and the development of hybrid forms between state-, market-, and user-centred models (de Magalhães and Carmona, 2009).

Discussion

National differences

In general, cases of partnerships and/or advanced arrangements were relatively rare and difficult to engage in the sampling process. Based on this observation, it seems fair to conclude that standard arrangements were (still) the principal choice for contracting-out in the period observed (2005–2007). It was nevertheless possible in all four national contexts to identify advanced arrangements. The most advanced and complex arrangements were observed in the UK. The UK has had strong institutional support and centralized policy guidance in the last decade, promoting partnership-based arrangements (The Stationery Office, 2000). In Denmark and Sweden, the instances of partnerships observed were initiated in a context of limited (Regeringen, 2004) or non-existent institutional guidance. Partnership ideas were adapted horizontally from ‘partnering principles’ widespread in the construction industry in Denmark and Sweden. Such principles mainly refer to a collaborative style of contract management (Høgsted and Olsen, 2006). The two Type III

arrangements were identified in Denmark and Sweden, respectively. This may indicate that the contexts in the two countries are more supportive of less formalized, but still advanced arrangements, than the contexts in the UK and New Zealand. In general, New Zealand has a long-standing reputation for a theoretically informed (technocratic) approach combined with pragmatic concerns (i.e. what ‘works’) to public reforms, and policy guidance for using the private sector (Office of the Auditor-General, 2006) is relatively more critical than in the UK. The New Zealand case of an advanced arrangement was not formally identified as a partnership arrangement because the notion of ‘partnership’ was reserved by the client for only highly integrated collaborative arrangements (see also Katz, 2006). The arrangement had originally evolved from a standard arrangement with emphasis on competitive pricing and short-term contracting into a formalized partnership including a high degree of integration of economy, organizational structures, and joint decision-making. However, due to perceived liability issues on investment decisions arrangements were rolled back again into a setup with less economic and organizational integration.

It seems fair to conclude that the policy contexts in the UK and New Zealand have promoted and sustained the development of more advanced and formalized contractual arrangements than the more decentralized and pragmatic policy contexts in Denmark and Sweden. It can therefore be concluded that the UK, closely followed by New Zealand, was (also) in the lead in developing alternatives for contracting-out in urban green-space management in the period observed.

Organizational reasoning

Urban green-space managers are not normally aware of national differences or able to look beyond the possibilities given within a national context. However, in all 14 cases they were keenly aware of the specific reasoning, within their respective organizations, behind the choices directing the overall development of their contractual arrangements. The various lines of reasoning are summarized in Table 4.

In a comparative perspective (Williamson, 1991), it can be hypothesized that certain forms of contractual arrangements will be adopted for reasons of efficiency determined parametrically by the institutional environment and inherent service characteristics. Congruently, the reasoning observed was partly a result of various strategies employed by urban green-space managers for minimizing the costs of management and optimizing the productive value of allocated assets. This kind of reasoning could include the choice of both standard arrangements and advanced arrangements. In cases where managers had adopted an advanced arrangement this was typically done after substantial negative experiences with the standard arrangement. However, it should be noted that for managers mainly relying on an in-house provider, the standard arrangement was typically stated as the preferred option. It is also worth noting that an ambition to develop park services, and not to improve contract design and management, could be driving the change in contractual arrangements. As urban green-space services were specified and defined differently, this suggested that the best choice of

Table 4. Reasoning in the choices of arrangement for contracting out in 14 cases of urban green space management.

Reasoning	Direction in development	Explanations
<i>Testing and spurring in-house provider</i>	Choice of standard arrangements	Contracting-out is only a secondary aim. Thus here is no need for developing contractual arrangements.
<i>Limited management resources</i>	Sticking with the standard arrangement or choice of only a few advanced instruments	No resources for developing or managing contractual arrangements.
<i>Reducing transaction costs</i>	Mixed. Choice of both standard and advanced contractual arrangements	Both advanced and standard arrangements may incur high management costs due to situational factors or poor management capabilities.
<i>Improve allocation of resources and investment levels</i>	Choice of advanced arrangements	Limited possibilities for effective allocation /finance of resources through centralized decision-making.
<i>Using complementary competencies</i>	Choice of advanced arrangements	Intention to exploit the potential in a high degree of division of labour.
<i>Improving contract management</i>	Choice of advanced arrangements	Limited potential for further development through the standard arrangement.
<i>Change or avoid adverse management dynamics</i>	Choice of advanced arrangements	Negative experiences with standard arrangements.
<i>Trying something ‘new’</i>	Choice of advanced arrangements	Modernizing contracting approaches according to requirements in the institutional environment.
<i>Developing park services</i>	Choice of advanced arrangements	Shift in focus from monitoring toward innovation of park services.

contractual infrastructure may change in accordance with how the character of services is defined by urban green-space management. Following this observation, it does not generally make sense to speak of one best type of arrangement for contracting-out in urban green-space management.

Conclusion

The purpose of the paper was limited to present an overview of the infrastructure used for managing contracts in urban green-space management. As main result, the paper presented a toolbox consisting of various arrangements, approaches, and instruments. The reader should be reminded that the paper has only presented the infrastructure currently in use by urban green-space managers, i.e. the paper does not consider hypothetical infrastructure, infrastructure used in other task environments, or infrastructure that for one reason or another yet has to be picked up by urban green-space management. However, the analytical framework may be used to put additional infrastructure (i.e. new developments) into a comparative perspective. The toolbox resulting from the study of practice can in turn be used as an inspirational source for developing contractual instruments, approaches, and arrangements.

Compared with the range of possibilities identified in the literature on public service contracting, the overview disclosed substantial variation in the infrastructure used for contracting-out in urban green-space management. Although the sample strategy deliberately sought to include diversity, it was somehow surprising that in the single task environment of urban green-space management an extensive range of possibilities was observed. It follows that the choices for development cannot satisfactorily be understood through a simple dichotomy between partnership arrangements and standard arrangements, as one might be persuaded by reading the literature. As this study of current contracting practices has shown, the actual development may be based on a much more complex range of potential alternatives. Both policy context and organizational reasoning were observed to influence the choice of arrangement. In particular, intentions to improve the framework for contracting-out were observed to result in choices of a more advanced infrastructure, whereas the presence of an in-house provider could result in the choice of a standard arrangement. The way services were defined could also direct the choice.

Viewed as a 'resource', urban green spaces embed a range of functions and services of immense value for modern urban life. Management and its infrastructure are at the core in the utilization of these recreational, societal, economic, and ecological values. It may there-

fore be hypothesized that the various choices for designing the infrastructure enable different conceptions and uses of the urban green-space resource and thus realize differential values for the broader urban setting and its various stakeholders. The identification and utilization of these values and resources are a matter of inherently political judgment. As a supplement to other key research questions related to the management and governance of urban green spaces (James et al., 2009), this may be noted as a daunting task for future research: to enable comprehensive evaluations of the managerial value of various contractual arrangements in urban green-space management with the aim of informing and reflecting political choices.

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