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A review of the outcomes from contracting out urban green space maintenance

What we know, don't know and should know

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1 **A review of the outcomes from contracting out urban green**
2 **space maintenance: What we know, don't know and should**
3 **know**

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12

13

14 **Abstract**

15 Private delivery, i.e. contracting out, of maintenance services in urban parks and green
16 spaces has since the 1980s been spurred by neoliberal reform promises of improved
17 performance. This article contributes to discussions of whether contracting out park and
18 green space maintenance services is a well-performing alternative by evaluating what is
19 known – and not known – about the outcomes in a narrative review of thirteen studies
20 bridging experiences from four decades and three country contexts. It is found that the
21 balance of reported economic and managerial outcomes mostly are on the positive side
22 while the balance of reported outcomes related to service quality and staff are found to
23 be on the negative side. Findings indicate that reforms have partly delivered on their
24 promises. However, the reviewed studies are found to be dominated by evaluations
25 based on governing values inherent in neoliberal management reforms rather than
26 alternative management paradigms, rely on older data from a limited number of country
27 contexts, and lack an accumulated understanding of explanation of outcomes. Finally,
28 the reviewed studies pay little or no attention to the details of the development of
29 different contracting and organizational models within contemporary urban green space
30 management. Future research can expand further on what is known by addressing these
31 key caveats.

32

33 **Keywords**

34 Contracting out; green spaces; maintenance; management; narrative review; parks;
35 performance

36 **Introduction**

37 One profound change within local governments' delivery of maintenance services in
38 urban parks and green spaces in many countries in the last four decades is a shift toward
39 greater reliance on private contractors – a shift that simultaneously has challenged and
40 reduced public authorities' reliance on in-house provision (Jones, 2000; Lindholst,
41 2009; Nuppenau, 2009). In a global perspective, the increased reliance on private
42 contractors in the public sector is one tangible result from the last four decades' reform
43 push promoting new organizational and managerial instruments and values based on a
44 neoliberal belief in 'markets' as superior mechanisms for improving the performance of
45 service delivery (Pollitt and Bouckaert, 2011; Hansen and Lindholst, 2016).

46 Evaluations of whether the promises of neoliberal beliefs have been fulfilled as
47 well as what the broader outcomes are from the increased reliance on private contractors
48 for delivery of maintenance services in urban parks and green spaces have been covered
49 by a small number of studies over the years. The studies have within perspectives
50 confined to a single country context and particular time periods provided either 'narrow'
51 evaluations of a particular outcome such as difference in expenditure levels (e.g. Jang,
52 2006) or provided more rounded narratives reporting on a broader set of experiences
53 and outcomes (e.g. Jones, 2000). However, no research has in a cross-national
54 perspective within the context of urban green space management gauged what is
55 hitherto known – and not known – about the outcomes for service delivery from the
56 increased reliance on private contractors.

57 With the aim of illuminating this 'grand puzzle', this article provides a review
58 of internationally available studies reporting on outcomes from public authorities' use
59 of contracting out for delivery of maintenance services in urban parks and green spaces

60 – a practice that critically has changed who carries out maintenance services in urban
61 parks and green spaces. The key research question addressed in the article is: *what is*
62 *known (and not known) in a cross-national perspective about the outcomes for service*
63 *delivery from contracting out maintenance services in urban parks and green spaces.*
64 To address the research question, the article first provides an introductory theoretical
65 overview and discussion of the idea of using contracting out in the public sector for
66 improving performance, secondly it identifies and review altogether 13 internationally
67 available studies reporting on outcomes from contracting out maintenance services in
68 urban parks and green spaces, thirdly it discusses the findings on outcomes against
69 theory, and fourthly it extrapolates from the findings in the review and pinpoints key
70 knowledge gaps which should be addressed in future research. The remainder of the
71 article is structured into four main sections: ‘Theories on contracting out,’ ‘Methods and
72 materials,’ ‘Review of evidence,’ ‘Discussions,’ and ‘Conclusions.’

73

74 **Theories on contracting out**

75 The idea or prescription that private contractors should be systematically involved in
76 public service delivery with the purpose of improving public sector performance is
77 associated with the rise of public reforms from the 1970s and onward subsumed under
78 the heading of ‘new public management’ (NPM) (Hood, 1995). As part of its core
79 values, the NPM has ingrained the wider neoliberal belief that various ‘market-like’
80 mechanisms, such as competition, free choice or benchmarking, are superior for
81 coordinating and organizing public activities (Hansen and Lindholst, 2016). The belief
82 has been backed by theoretical arguments on the private sector’s comparative ability to
83 operate more cost-effectively than the public sector due to stronger competitive and

84 (profit-based) economic incentives to innovate and bring down operational costs
85 (Boyne, 1998). Congruently, private contractors have become involved in public service
86 delivery through a ‘competition model’ for contracting public services (Dehoog, 1990).
87 In this model, a government is ideally able to specify a service in a formal contract and
88 through a process of competitive tendering with participation of several potential
89 providers – public as well as private – contract with the provider that promises to
90 deliver services at the lowest cost. The model requires (as a minimum) that a
91 government can spur competition among several qualified providers, has a capacity for
92 managing and monitoring contracting processes, and can be relatively certain regarding
93 future funding levels, service needs and service technology. The value of linking a
94 highly specified set of services with fixed ex ante pricing in a contract will tend to
95 diminish if change later occurs in, for example, user patterns or planning objectives. The
96 remedy in many green space maintenance contracts has been to build in a degree of
97 flexibility (Lindholst, 2009). However, in theory, this approach runs counter to the basic
98 logic of the low cost-focus inherent in the competition model.

99 Using markets and contract-based exchange furthermore involves ‘transaction
100 costs’ for activities ensuring that received values in an exchange relation match
101 expected values (Ouchi, 1980). These costs include various activities related to
102 planning, formation and monitoring of service delivery (by contracts). Ultimately,
103 transaction costs need to be compared across available alternatives for organizing
104 service delivery. In other words, assessment of the most cost-efficient arrangement for
105 service delivery requires comparison of the transaction costs associated with each
106 alternative (Williamson, 1991). However, calculations of comparative transaction costs
107 are notoriously difficult and seldom fully accounted for in studies of economic

108 outcomes from contracting out (Petersen et al., 2017). Hodge (2000) projected that
109 transaction costs associated with contracting out reduced average cost savings by
110 around two percentage points. In addition to transaction costs, contracting out may also
111 result in cost shifts and ‘quasi-market failures’ within the public sector where, for
112 example, reduced operational expenditures from staff lay-offs or higher productivity
113 associated with contracting out incur increased expenditures on health and social
114 welfare elsewhere or years later in the public sector (Boyne 1998). Several other issues
115 can also be associated with the use of the competition model for service contracting.
116 Kettl (2010), for example, elaborated on various ‘governance failures’, such as lack of
117 transparency in money flows, dependency on a single private contractor or lack of
118 internal contract management capacities, while the theory of ‘incomplete contracts’
119 (Hart et al. 1997) highlights that competitive tendering increases providers’ incentives
120 to offer low prices and/or reduce costs at the expense of quality in service delivery.

121 While the ideal case of the competition model seldom can be fully achieved in
122 practice it is an assumption that governments when possible at least will seek to
123 maximize economic efficiency in choosing among potential providers (Dehoog, 1990).
124 The competition model is usually expected to work better for some services than others.
125 Characteristics of parks and green space maintenance are in comparisons with other
126 public services commonly regarded as relatively well-suited for contracting out. A US
127 based study by Hefetz and Warner (2012), for example, found that contracting out of
128 park and landscape maintenance was characterized by higher competition levels, and
129 lower levels of contracting difficulties and investment requirements in comparison with
130 other municipal services. However, a relatively higher citizen interest in park services
131 indicated some caveats, as higher citizen interest is likely to require higher levels of

132 ongoing government coordination and control in order to ensure responsiveness toward
133 community needs. Based on the comparative characteristics, it can be argued that the
134 competitive model of contracting out can be expected to work relatively well for parks
135 and green space maintenance services in relation to economic performance but less so in
136 relation to other important aspects.

137 The competitive model of service contracting furthermore ingrains a distinct set
138 of governing values. The neoliberal belief in the market as a superior coordination
139 mechanism has through the NPM promoted core values in the public sector related to
140 competition, cost-effectiveness and productivity. Patterson and Pinch (1995), for
141 example, observed that the implementation of contracting out in the UK encompassed
142 an organizational shift toward ‘strategic centralization and operational decentralization’
143 as well as a shift toward a business and commercial discourse focused on ‘efficiency’,
144 ‘performance targets’ and ‘consumer needs.’ These values seem somehow odd or differ
145 from traditional bureaucratic values, such as legality and procedural fairness supporting
146 a ‘public ethos’, as well as governing values promoted in management paradigms in
147 newer reform trends such as involvement, deliberation and flexibility in decentralized
148 searches of ‘public value’ within networks of stakeholders (Hood, 1991; Stoker, 2006).
149 With the point of departure in alternative sets of governing values the performance of
150 contracting out can be judged very differently. For example, one longstanding criticism
151 in the literature of the competitive model of service contracting is the loss of democratic
152 deliberation and political control (Vincent-Jones, 2007) – or what have been called a
153 process of ‘hollowing out of the state’ (Rhodes, 1994). In the competition model private
154 contractors are intentionally engaged to deliver contracted services at the lowest
155 possible costs whereas in-house providers are directly governed by their political

156 constituencies within a hierarchical structure and can recurrently be required to serve
157 broader public purposes within a community or adapt to changing political preferences.
158 It follows that service delivery through in-house organizations is governed by a
159 different – if not more complex – set of values than the values governing the use of
160 private contractors through a competition model. In the institutional literature on
161 economic organization the difference between organizing production through markets
162 (‘buy’) versus hierarchies (‘make’) has been analysed in terms of comparative benefits
163 and costs (Williamson 1991). In-house provision may have advantages such as greater
164 ‘allocative’ efficiency (e.g. flexibility and ability to meet changing community needs
165 and user preferences) while contracting out may have the advantage in terms of greater
166 ‘technical’ efficiency (plan and provide standard services at the lower cost).

167 The differences between in-house and market based approaches as well as how
168 contracting out is organized may, however, not be as clear cut as analytical models
169 suggest. New models for contracting out serving other purposes than cost-effectiveness
170 have been introduced through shifts in reform focus in some countries, such as the UK
171 (Boyne, 1999), as well as discussed more broadly as an international trend in the
172 literature (Entwistle and Martin, 2005; Vincent-Jones 2007, Donahue and Zeckhauser,
173 2006). The new models include various partnership and collaborative approaches
174 supporting objectives related to service development, public deliberation, flexibility and
175 transformation rather than mere cost concerns. The focus on new models has also been
176 reflected within urban green space management where alternative contractual
177 arrangements, incorporating partnership features in various degrees, have emerged since
178 the early 2000s (Lindholst, 2009).

179 The upshot is that evaluations of outcomes from contracting out can have points
180 of departure in very different sets of values which illuminate different comparative
181 advantages and disadvantages of various arrangements for service delivery – and very
182 different conclusions may arise from the chosen approach.

183

184 **Methods and materials**

185 Materials for the review were partly identified by a systematic key-word based search
186 on the web of science database and partly by ‘show-balling’ within two streams of
187 literature. Identified materials were first screened for any inclusion or reference to
188 maintenance services with relevance for urban green spaces, e.g. park or grounds
189 maintenance. Secondly, each title was reviewed for any reported evidence on outcomes
190 related to private provision of maintenance services. Thirdly, the originality and
191 credibility of the evidence were reviewed by assessment of methods and data supporting
192 any reported outcome. A few titles were excluded in the third stage due to either severe
193 methodological flaws (e.g. Greene, 1994) or a more commentary-oriented character of a
194 title (e.g. Hebbert, 2008). The final list of all relevant materials for the review included
195 13 titles.

196 The search in the web of science (within the social science and emerging
197 indices) used a syntax including: contract* OR privati* OR outsour* AND green* OR
198 park* OR ground* AND maintenance. The search generated 698 unique hits. Inspection
199 of titles and abstracts reduced the number of relevant titles to only three. In the show-
200 balling two streams of research were inspected. The first stream comprised reviews of
201 outcomes from contracting out in the public sector by Borcharding et al. (1982),
202 Donahue (1989), Hirsch (1995), Domberger (1997), Boyne (1998), Hodge (2000) and

203 Petersen et al. (2017). The second stream consisted of existing studies of contracting out
204 within park and green space management in local governments including titles by Jones
205 (2000), Baycan-Levent and Nijkamp (2009), Lindholst and Bogetoft (2011), Jansson
206 and Lindgren (2012) and Lindholst et al. (2015). Inspection of the titles resulted in
207 altogether 10 relevant studies for the review.

208 Given the broader scope of the research, a ‘narrative’ approach was adapted for
209 the review (Green et al., 2006). A narrative approach allows for more detailed accounts
210 of reviewed evidence rather than summaries in either qualitative (e.g. summary of
211 positive or negative outcomes) or quantitative (e.g. calculation of effect sizes) terms.
212 Based on the narrative approach, the 13 titles identified in the literature search were
213 inspected and summarized through an inductive analytical process with regard to 1) any
214 findings on outcomes related to contracting out of park and green space maintenance
215 (reported outcomes), 2) any findings or discussion on factors which explain the reported
216 outcomes (explanations for outcomes), 3) the methods sustaining any finding or
217 conclusion (methods), and 4) contextual details of the studies (context).

218

219 **Review of evidence**

220 Table 1 provides a chronological overview of the titles, including reported outcomes,
221 any stated explanations for outcomes, the methods and finally the country context of the
222 data.

223

224 *** *Insert table 1 around here* ***

225

226 *The 13 studies in short*

227 The 13 studies covered data from a timespan of approximately three decades (1982-
228 2015) and included a limited number of country / regional contexts. The country
229 contexts included: USA (three studies), England and Wales (five studies), and
230 Scandinavia (five studies). With a few exceptions, the studies tended to focus on only
231 one or two key outcomes. Eleven studies reported on economic effects, eight studies
232 reported on effects on service quality, five studies reported on effects on management
233 and organization, while five studies reported on staff related effects.

234 Altogether ten studies reported statistics as part of their key findings while three
235 studies reported findings in terms of qualitative accounts. In terms of data, seven studies
236 were purely quantitative, two studies were purely qualitative while four studies were
237 based on a mix of quantitative and qualitative data. Key data sources across the studies
238 included surveys and research interviews with key stakeholders while register-based
239 data and expert assessments were used in a few studies only.

240

241 *Economic outcomes*

242 Seven out of the 13 studies found cost reductions as a major (positive) outcome. Six of
243 these seven studies also indicated improved technical efficiency, i.e. the same service
244 level was provided at lower costs. Two studies found no significant differences in
245 service expenditure levels between contracting and non-contracting municipalities. One
246 study found substantial cost increases in contract prices while one study found that the
247 likelihood of no cost change was substantially higher than the chance for cost savings.

248 Studies by Berenyi and Stevens (1988), Walsh and Davis (1993), and Lindholst
249 (2008) which measured cost change at the level of individual contracts all found that
250 contracting out was associated with cost savings, on balance. Walsh and Davis (1993)

251 found that for 69 cases the shift from provision of grounds maintenance by direct
252 services organizations (in-house) to contracting out had resulted in an average cost
253 reduction by a magnitude of 10.9 percent (with a standard deviation around 15
254 percent). Berenyi and Stevens (1988) found that municipal provision of, respectively,
255 street tree and turf maintenance were respectively 27 percent and 29 percent cheaper
256 than private provision in a statistical analysis of 20 municipalities where other factors
257 such as scale and quality were held constant. In a study of a Danish state agency's
258 contracting practices, Lindholst (2008) reported that a 34 percent cost saving on overall
259 expenditures on maintenance operations was realized though introduction of contracting
260 out and successive rounds of procurement without compromised service levels and
261 quality of service delivery. Studies by Jones (2000) and Nuppenau (2009) based on
262 qualitative / narrative accounts of effects in multiple case studies of local governments
263 in, respectively, England and Denmark also reported cost savings as a key outcome
264 from the introduction of contracting out. Two US studies by, respectively, Martin and
265 Stein (1992) and Jang (2006), which measured cost differences at the level of overall
266 municipal expenditures and provided analysis based on statistical analysis of
267 quantitative data, did not find any statistically significant association between
268 contracting levels and spending levels. Clark (1997) found that 71 percent of
269 responding UK local authorities reported that 'better value for tax payers' was achieved
270 from contacting out versus 25 percent reporting that this was not the case. The study by
271 Leiren et al. (2016) found highly negative economic outcomes in terms of substantial
272 cost increases for Norwegian municipalities from their latest use of competitive
273 tendering, while the study by Bretzer et al. (2016) found that the likelihood of no cost

274 change in competitive tendering was substantially higher for Swedish municipalities
275 than the chance for cost savings.

276 Across the studies, the key explanatory factors for economic outcomes
277 encompassed references to ‘competition’, ‘change in standards/quality levels’, ‘higher
278 private productivity’ and ‘government objectives’.

279 *Competition.* In almost all studies the introduction of competition was theorized
280 to be a key driver of improved economic performance. The study by Martin and Stein
281 (1992), for example, provided a direct empirical test of the importance of competition /
282 contracting levels for cost levels and found that contracting out was significantly related
283 to (slightly) lower levels of spending. However, further decreases in spending levels
284 from additional contracting beyond 25 percent of all municipal services were found to
285 be insignificant. The studies of, respectively, Norwegian and Swedish municipalities by
286 Leiren et al. (2016) and Bretzer et al. (2016) also indicated that competition varied
287 according to geography and administrative structures. Both country contexts are
288 characterized by many very small municipalities scattered over vast geographical areas.
289 In this context, competition – as well as the level of contracting out – was higher in the
290 more densely populated metropolitan areas.

291 *Higher private productivity.* All reviewed studies implicitly or explicitly stated
292 that productivity, i.e. producing the same output with fewer inputs, was higher in the
293 private sector than in the public sector. Walsh and Davis (1993), for example, reported
294 that among park managers it was believed that a key reason for cost reductions was
295 relatively higher private sector productivity. The reported cost savings by Lindholm
296 (2008) were attributed to a shift to full-scale contracting out and the abolition of a
297 former ineffective and poorly managed in-house arrangement. From findings in studies

298 by Berenyi and Stevens (1988) or Patterson and Pinch (1995) it is also evident that
299 higher private productivity has been achieved by substantial changes in the number of
300 employees, employee composition, work conditions and workforce management.

301 *Change in service levels.* Some studies prompted the importance of change in
302 service levels as a direct driver of cost change in contracting out. For example, Walsh
303 and Davis (1993) found a key reason for a part of the reported cost reductions was
304 changes toward lower standards for service quality while the main source for cost
305 increases was reported to be changes toward higher standards.

306 *Government objectives.* Based on the studies by Martin and Stein (1992),
307 Patterson and Pinch (1995) and Jones (2000), it can furthermore be argued that pursuit
308 of general government objectives in terms of cost reductions in contracting practices is a
309 key explanatory factor for the observed effects. In particular, it can be argued that
310 contracting out has been used as a means through which governments implement an
311 objective of cost reduction (as well as objectives related to reducing the number of staff
312 in public organizations). This is perhaps most evident in the policies on compulsory
313 competitive tendering in the UK which provided a tight regulation of the use of
314 contracting out as a clear cost-reducing mechanism (Dempsey et al., 2016). A special
315 case, which also illuminates the importance of taking objectives into account, is the
316 study of contracting out in Norwegian municipalities by Leiren et al. (2016). The study
317 found that the overriding reason for private service provision was a lack of in-house
318 capacity rather than cost concerns.

319

320 *Service outcomes*

321 Four studies reported overall neutral effects on service quality while four studies
322 reported negative effects and one study indicated positive effects on service quality.
323 Studies by Lindholst (2008), Berenyi and Stevens (1988), Walsh and Davis (1993) and
324 Clark (1997) found no overall negative direct effect on service quality. Walsh and Davis
325 (1993) found few reports of declining quality as an effect of contracting out. However,
326 changes in service standards were reported to affect cost levels (see above). Clark
327 (1997) found that 36percent of responding local authorities reported that quality levels
328 had decreased compared to 37 percent who reported that reported that quality levels
329 had increased. The two studies by Jones (2000) and Lindholst et al. (2015) reported
330 negative effects on service quality and they in particular indicated problems with
331 *allocative* efficiency, i.e. overall functionality of parks and their ability to satisfy user
332 needs, within public service delivery systems. The study by Jones (2000) found that
333 service levels / quality had generally declined by contracting out in the era of
334 compulsory competitive tendering in the UK and created run down and derelict park
335 areas low in horticultural and recreational value. Jones (2000) attributed that decline
336 partly to '*making parks fit for mowers rather than mowers fit the needs of the park*' as
337 well as to a loss of community contact by shifts from site-based staff toward mobile
338 work gangs. The study by Lindholst et al. (2015) pointed out that service specifications
339 adopted for contracting out of grounds maintenance have drawbacks, as they tend to
340 limit the view on service quality to a question about compliance to pre-predefined
341 technical measures based on horticultural knowledge, rather than enabling integration of
342 broader stakeholder views on what services are – or should be – about. In consequence,
343 contracting out has resulted in implementation of managerial arrangements with limited
344 scope for democratic deliberation – i.e. limited scope for alignment of resource use with

345 broader community or user preferences. Leiren et al. (2016) provided a comparison of
346 satisfaction levels with performance of public and private provision and found that
347 satisfaction levels with public provision compared to private provision were
348 significantly higher for three out of six measures. However, the difference may be a
349 result of differences in the type of maintenance services, as the Norwegian
350 municipalities mostly used private contractors for provision of services they could not
351 provide themselves. Dempsey et al. (2016) found that satisfaction levels with private
352 provision among English local authorities on the average were surprisingly high
353 compared to the legacy of contracting out from the era of compulsory competitive
354 tendering in the 1980s and 1990s.

355 The explanations for quality effects stated in the reviewed studies related to
356 *organizational changes* in service delivery systems in which contracting out is
357 introduced. The changes related to new organization of operational staff, the
358 operationalization of services in order to comply with formal management systems and
359 rationalizations based on available organizational capacities (e.g. ‘making parks fit for
360 mowers’). Walsh and Davis (1993) and Nuppenau (2009), for example, reported that
361 service standards in many cases did not exist prior to the introduction of competitive
362 contracting. In an extended argument, Lindholst et al. (2015) found that the use of
363 particular standards for defining services in accordance with the requirement for
364 contracting out has introduced and entrenched a particular way of thinking about and
365 making decisions on ‘quality’ in urban park management. This ‘mindset’ was suggested
366 to be more occupied with serving professional needs rather than addressing broader
367 service needs.

368

369 *Managerial and organizational outcomes*

370 Both negative and positive outcomes for managerial and organizational performance
371 were reported in studies by Clark (1997), Jones (2000), Lindholst (2008), Nuppenau
372 (2009) and Lindholst et al. (2015).

373 Clark (1997) found that park managers reported increased difficulties with
374 service monitoring by implementation of contracting out but at the same time also that
375 service monitoring had become more 'effective' for most local authorities. Jones (2000)
376 reported several managerial improvements from the implementation of contracting out
377 such as standardization of work activities and service levels across locations and
378 creation of information and resource systems for improved centralized management and
379 decision-making. Correspondingly, Lindholst (2008) found that management of ground
380 maintenance services had become more effective by the introduction of a tougher
381 contract management regime based on 'high-powered' (economic) incentives for
382 managing externally provided services. However, the shift toward a tougher
383 management regime also left important issues aside related to day-to-day flexibility and
384 collaboration. Nuppenau (2009) reported that competitive tendering improved internal
385 management and organisation by implementation of new managerial tools, such as
386 performance targets, and by spurring staff to innovate and perform better. Lindholst et
387 al. (2015) found that development of quality standards based on horticultural knowledge
388 supported cost-effective service delivery through the use of competitive tendering, but
389 also unintentionally limited the scope for public deliberation.

390 Across the studies, the introduction of new management tools associated with
391 contracting out provided a major explanatory factor for reported effects on management
392 and organization. As found by Nuppenau (2009), new management tools have also been

393 applied and improved management of in-house organizations. An important caveat,
394 noted in the study by Clark (1997), is that improved management depends on contract
395 management capability and lacking capabilities may result in ineffective management of
396 service delivery.

397

398 *Staff outcomes*

399 Studies by Berenyi and Stevens (1988), Patterson and Pinch (1995), Clark (1997), Jones
400 (2000) and Nuppenau (2009) provided evidence on the impact on staff. Overall, the
401 reported effects are negative with the exception of mixed effects reported by Nuppenau
402 (2009).

403 Berenyi and Stevens (1988) found that contracting out compared to in-house
404 provision involved several differences in personnel practices including lower levels of
405 absenteeism, a younger workforce, a lower level of fringe benefits, lower average age
406 and tenure, easier access to hiring and firing, shorter distance between management and
407 direct labour as well as a general lower level of labour costs among private contractors
408 compared to municipal organizations. Patterson and Pinch (1995) found that the policy
409 of compulsory competitive tendering in the UK had led to substantial reductions in both
410 public and private workforces as well as deteriorating employment terms and conditions
411 within a labour market characterized by lower wages and more precarious working
412 conditions. In perspective, Patterson and Pinch (1995) observed that implementation of
413 contracting out had resulted in '*a separation of a concern for the services to be provided*
414 *from a concern for those people who will provide that service*'. Congruently, Clark
415 (1997) found that staff training was not included in the vast majority of ground
416 maintenance contracts in the UK in the mid-1990s, and Jones (2000) reported a lack of

417 investment in and loss of the sector's skills base as well as loss of initiative, morale and
418 creative flair in the workforce. Nuppenau (2009) found, however, mixed effects on in-
419 house operational staff exposed to competitive pressures in Danish municipal
420 organizations. On the negative side, change processes related to contracting out were
421 reported to be experienced by staff as '*a time of resistance, scepticism, anxiety and*
422 *insecurity*'. On the positive side, Nuppenau (2009) found that new performance
423 standards and organization of work were helpful in generating learning, sharing
424 experience and motivating work efforts among staff.

425 A summary of the provided explanations for reported effects on staff includes
426 introduction of competitive organizational environments, substantial differences in
427 management and employment terms as well as workforce composition between the
428 public and private sector, weaker managerial concerns for staff in disaggregated
429 organizations based on a purchaser-provider models, and underinvestment in staff
430 training.

431

432 **Discussion**

433 The reported outcomes were summarized under headings for effects on economy,
434 service quality, management and organization, and staff. Reported outcomes of positive,
435 neutral and negative kinds were observed. The list of positive outcomes included: cost
436 savings at the level of contracts, improved technical efficiency, more effective
437 management and monitoring, learning and motivation. The list of negative outcomes
438 included: declining service quality, lacking public participation and democratic
439 deliberation, disengaged staff, loss of professional skills, and a reduced workforce.

440 Neutral outcomes / no effects included, for example, no impact on service quality or no
441 overall change in expenditure levels for park services.

442

443 **** *Insert Table 2 around here* ****

444

445 Table 2 provides a summary of the instances of positive, neutral and negative outcomes
446 reported for the four types of outcomes. A finding is that the overall evaluation of
447 outcomes is mixed. However, the tendencies are that reports on economic and
448 managerial/organizational outcomes on balance are positive while reports on service
449 and staff on balance are negative. Most instances of reported outcomes are, furthermore,
450 counted as economic outcomes (12 instances), followed by service outcomes (nine
451 instances), managerial/organizational outcomes (seven instances) and outcomes for staff
452 (five instances).

453 Across the reviewed studies it was notable that explanations for the various
454 outcomes were not systematically addressed or discussed and only a single study by
455 Berenyi and Stevens (1988) included systematic research on the reasons for
456 performance differences between public and private provision. Thus, the reviewed
457 studies themselves do not provide a systematic accumulation of a deeper or more
458 refined understanding of why and under which circumstances various outcomes occur.
459 However, by summarizing the various explanations reported across the reviewed
460 studies, some hypothetical associations can be established. Table 3 provides a summary
461 of all reported explanations and their main association with the four types of outcomes
462 across the 13 studies.

463

464 *** Insert table 3 around here ***

465

466 Across the studies, introduction of competition, relative effectiveness of private
467 contractors (i.e. private ownership) and cost-focused contracting policies were
468 predominant explanations for the various outcomes. Cost reductions were in some
469 studies, e.g. Berenyi and Stevens (1988) or Patterson and Pinch (1995), found or argued
470 to be a result of lower wages and workforce reductions driven by differences between
471 public and private sector management as well as overall competitive pressures.
472 Introduction of new management systems (e.g. service standards) as part of the
473 requirements for implementing contracting out were also a recurrent explanation across
474 several studies, e.g. Clark (1997) or Lindholst (2008), for managerial and organizational
475 outcomes. However, in order to improve the understanding of the drivers for various
476 outcomes a recommendation for future research is to address the various explanations in
477 more systematic approaches.

478 The reviewed studies reported on outcomes from a limited range of country
479 contexts. The three contexts in the reviewed evidence included the UK, the US and the
480 three Scandinavian countries. The limited number of country contexts limits how far
481 results can be generalized. Each country context embeds particular historical path
482 dependencies in reform orientation – or governance traditions – which are likely to
483 influence both reform aims and outcomes (Rhodes, 1999). Adding to the complexities
484 of country context are the policy shifts or incremental institutional changes which can
485 be observed over time within a country context. The relatively high number of reviewed
486 studies from the UK based on data from the 1990s (four out of a total of five UK based
487 studies), for example, infuses a certain bias in the overall evidence base toward the

488 intricacies of the implementation of contracting out in the UK context. In an
489 international comparison, it is critical to note that the shift toward greater reliance on
490 private contractors in the UK in the 1990s was spurred by tight and cost-focused
491 regulations for compulsory use of competitive tendering in local authorities (Clark,
492 1997) – a policy abandoned by the end of the 1990s in a shift to a more flexible and
493 strategic approach to service provision based on a broader idea of ‘best value’ (Boyne,
494 1999). In contrast, more flexible and pragmatic policies have been implemented in
495 Scandinavia (e.g. Leiren et al., 2016; Lindholst et al., 2016). Given the policy context in
496 the UK in the 1990s it is no surprise that the three studies based in data for this period
497 all found that contracting out resulted in improved economic performance in terms of
498 either cost reductions (Walsh and Davis, 1993; Jones, 2000) or better value for money
499 (Clark, 1997). To gauge further the importance of country (and policy) context, a
500 recommendation for future research is to expand the number of country contexts.
501 Beyond a requirement to balance the potential bias from particularities of country
502 context, it is also of inherent interest to see how alternative arrangements for providing
503 maintenance in urban parks and green spaces perform in additional country contexts.

504 In the section on theories of contracting out it was highlighted that outcomes can
505 be evaluated from different sets of governing values embedded in different management
506 paradigms. The reviewed evidence was dominated by studies which took as their point
507 of departure values associated with the neoliberal reform agenda. This dominance was
508 reflected, for example, in the majority of studies addressing whether cost-savings have
509 been achieved – a question clearly associated with the NPM. Furthermore, some of the
510 reviewed studies reporting on improved management/organization referred to
511 managerial dimensions of relevance to key values in the NPM. For example, the shift

512 toward contracting out was reported to be an improvement in the performance of
513 centralised and formal management practices in studies by Jones (2000) and Lindholst
514 (2008). However, strategic centralization in the management of public activities is a key
515 feature of NPM and its improvement may come at the expense of a loss of the capacity
516 for decentralized and responsive management within local networks– an important
517 capacity for implementation of more collaborative and deliberative oriented reforms. In
518 other words, the improved performance in management is reported from the perspective
519 of a particular set of governing values rather than an evaluation of the outcomes seen
520 from the perspective of alternative management paradigms. Overall, only limited
521 evidence was found which took point of departure in the governing values associated
522 with other major paradigms for managing and organizing the public sector. The studies
523 by Lindholst et al. (2015) and Jones (2000), for example, reported on losses in the
524 capacity and flexibility to addresses and satisfy user needs – key values related to
525 reform trends based on ideas of governance including public involvement and
526 democratic deliberation. Other studies reporting on losses in the skill-base, e.g. Clark
527 (1997), Patterson and Pinch (1995) or Jones (2000), also provided some evidence on
528 detrimental effects from contracting out on the function of organizational models based
529 on more traditional administrative values related to professionalism and robustness. It is
530 a recommendation for future research to provide more rounded evaluations which
531 explicitly illuminate and evaluate outcomes from the viewpoints of the different
532 governing values inherent in alternative management paradigms.

533 None of the reviewed studies compared or distinguished between different
534 approaches to contracting out in their links to outcomes. The introduction of
535 collaborative approaches to contracting out in urban green space management the 2000s

536 has hosted a strategic focus in public-private relations related to service development
537 and changes/improvements in managerial approach (Lindholst, 2009). Earlier studies
538 have called for such approaches in order to mitigate perceived flaws of earlier
539 approaches to contracting out (e.g. Jones, 2000; Lindholst, 2008; Dempsey and Burton,
540 2012). However, the reviewed studies do not shed any light on whether newer
541 collaborative approaches perform differently than long-standing standard approaches
542 grounded in the competition model. Even newer studies in the review, e.g. Dempsey et
543 al. (2016) or Leiren et al. (2016), confined reports on outcomes to the relative
544 performance between private and in-house provision as the two main alternatives. A
545 recommendation for future research is to pay attention to the details of different
546 contractual and organizational arrangements and their comparative performance.

547 Another main finding from the review is the relatively high share of the studies
548 reporting positive economic outcomes—a finding apparently indicating that one key
549 promise of NPM, i.e. improved economic performance, has been fulfilled by the shift
550 toward greater reliance on private delivery. However, some caveats must be raised.
551 None of the reviewed studies considered potential off-setting effects from, for example,
552 cost shifts in the public sector or the size of comparative transaction costs. This is a
553 recurrent and longstanding critique of studies of the economic performance of
554 contracting out in the public sector (Boyne, 1998; Petersen et al. 2017). Some of these
555 effects, in particular comparative transaction costs, are implicitly accounted for in the
556 group of reviewed studies comparing overall expenditure levels for park services
557 between municipalities with different levels of contracting out (e.g. Martin and Stein,
558 1992). On the other hand, these studies may again fail to account for any re-allocation
559 or re-investment within park services, e.g. new facilities, of potential cost gains from

560 contracting out maintenance services. Earlier estimates of transaction costs associated
561 with contracting out in the public sector more generally indicate that their magnitude (a
562 two per cent point reduction in the level of estimated cost savings) is certainly not
563 tipping the overall balance of economic performance (Hodge, 2000).

564 Studies comparing the economic performance from contracting out the first
565 time, i.e. a shift from public to private provision, may also to some degree compare
566 service provision of public and private organizations which differ in their comparative
567 advantages and disadvantages as well as governing values. The introduction of
568 competitive tendering and shifts from public to private provision has historically
569 implied a change from one type of organization to another. Clark (1997), for example,
570 noted that public providers in local governments in the UK prior to the implementation
571 of the UK based versions of NPM reforms were characterized by a unitary and skill-
572 based organization based on horticultural (and arboricultural) knowledge and low
573 degrees of formalization of managerial systems. Consequently, public organizations
574 were abruptly situated in competition with private organizations whose business culture
575 was already closely aligned with the governing values, such as cost-efficiency and
576 productivity, inherent in the NPM. In Scandinavia, however, municipal park
577 management witnessed a more incremental and pragmatic approach to the introduction
578 of competition and private contractors in the 1990s and 2000s where public
579 organizations were able to prepare themselves for potential exposure to competition
580 (e.g. Nuppenau, 2009). Generically, the two types of organization, i.e. the private
581 contractor and the traditional public provider, can be contrasted as a difference between
582 their orientations toward, respectively, ‘inputs’ and ‘outputs’ as well as a difference
583 between organizational values related to, respectively, ‘robustness’ and ‘efficiency’ (see

584 also Hood, 1991). In other words, the improved cost-efficiency reported in several of
585 the reviewed studies may have come at the disadvantage of organizational robustness as
586 well as being detrimental to the governing values inherent in alternative management
587 paradigms (as discussed above). Such dynamics are reflected in the earlier critique
588 within the UK context of the (massive) losses in skills, i.e. organizational robustness,
589 due to the implementation of competitive tendering in the 1980s and 1990s (e.g. Jones,
590 2000). However, as found by Nuppenau (2009) in an Scandinavian context, municipal
591 provider organizations have over time become ‘marketized’ by incorporation of new
592 management systems such as service standards, resource management and cost-based
593 accounting principles, or business plans. In other words, public and private provider
594 organizations have become – at least in some countries – more alike due to the NPM.
595 The dynamics in the internal organizational development of in-house providers indicate
596 that earlier studies have compared the (economic) performance of very different
597 organizations while later studies have compared organizations that were more alike. In
598 perspective, generalizations forward in time of findings in earlier studies may come
599 with some caveats as well as the organizational dynamics toward convergence (also)
600 motivate a call for new studies based on contemporary data.

601 Finally, across the reviewed studies it was found that research has relied on a
602 mix of qualitative and quantitative data, collected from secondary and primary data
603 sources in terms of register-based repositories, expert evaluations, surveys and
604 interviews as well as different analytical methods ranging from longitudinal case studies
605 based on narrative accounts toward application of multivariate statistical analysis. Given
606 the relatively small number of studies, the represented materials and methods are quite
607 heterogeneous and complementary in character. Given well-known strengths and

608 weaknesses of different research designs, no particular recommendation for future
609 research designs can be provided from the review beyond the substantial call raised in
610 the foregoing discussions for updating the evidence base by inclusion of further country
611 contexts, contemporary data, more systematic explorations of explanatory factors, and
612 more detailed differentiation between various alternatives for providing maintenance
613 services.

614

615 **Conclusion**

616 This article provided a review of what was known – and not known – about the
617 outcomes from contracting out maintenance services in urban parks and green spaces.
618 The review was based on an analysis of altogether 13 internationally available studies
619 with regard to type of reported outcomes, explanations for outcomes, methodological
620 basis and country context. The studies covered data from a timespan of four decades
621 and three major country contexts. Four major outcome types – economic, service,
622 management/organisation and staff – were found to be illuminated in the reviewed
623 studies. Economic and managerial performance tended to be evaluated as positive while
624 outcomes for service quality and staff tended to be evaluated as negative.

625 The evaluation of what is known about the outcomes was, however, to some
626 extent flawed or influenced by the particularities of country and policy context in the
627 reviewed studies. The review furthermore found that what is known mostly relates to
628 questions raised from a NPM perspective. In other words, contracting out has mostly
629 been evaluated for its merits (or perils) in terms of economic performance. The merits
630 seen from other managerial perspectives and their inherent governing values, for
631 example democratic deliberation or legal compliance, were more scarcely covered or

632 not covered at all. Thus, the evidence is somehow ‘flawed’ toward the particular set of
633 governing values associated with the NPM perspective. Furthermore, even evaluations
634 of contracting outcomes with a point of departure in a NPM perspective were to some
635 extent flawed. For example, comparable transaction costs or cost shifts in the public
636 sector were not explicitly addressed in studies reporting estimates on economic
637 outcomes.

638 Finally, the reviewed studies did not distinguish between different alternative
639 approaches to contracting out. This should be of less concern for findings from early
640 studies based on data from the 1990s, or earlier, where a tighter alignment with a
641 competitive model can be assumed. Given the introduction of collaborative approaches
642 to contracting out from the early 2000s and onward it has become of increasing interest
643 to distinguish between alternative approaches to involvement of the private contractors
644 and their comparative performance. This development should be seen as parallel to the
645 organizational reform and development of in-house providers in the same period. In
646 other words, the organization and performance of contemporary private contractors and
647 in-house providers are likely to be very different than four decades ago.

648 In perspective, the review found that what is known about the outcomes from
649 contracting out in a cross-country perspective is limited in important respects. Future
650 research is needed and may expand on what is known by addressing knowledge gaps
651 by, for example, expanding the number of country and policy contexts, seeking to
652 connect and accumulate evidence on the explanations for reported outcomes, pay
653 attention to different contracting and organizational models as well as take point of
654 departure in a wider set of governance values than those ingrained in neoliberal reform
655 approaches.

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- 771

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

Reference	Reported key outcome(s)	Explanatory factors	Methods	Country context
Berenyi and Stevens (1988)	Delivery of street trees and turf maintenance respectively 27% and 29% cheaper in municipalities with private delivery compared to public delivery. Estimates controlled for service levels and quality.	Less labour intensive organization. Lower salaries. More direct control with manpower and use of technical equipment. Different characteristics of employees and employment.	Statistical analysis (OLS regression with controls) of the comparability and effectiveness of street tree and turf maintenance between public and private provision based on quantitative data (year 1984) from 20 cities.	USA
Martin and Stein (1992)	Insignificant relationship between contracting out and overall expenditures on maintenance operations.	Theoretical considerations about governments' need to reduce costs and number of public employees.	Statistical analysis (OLS regression with controls) of service provisions in 877 local authorities based on available survey data from 1982-1983.	USA
Walsh and Davis (1993)	Cost saving (average 10%) and some improvement in technical efficiency for services contracted out (e.g. no impact on service quality).	Improved productivity and changes (increase/decrease) in work standards.	Descriptive analysis of survey-data (1989-1992) for eight local services, including 69 grounds maintenance contracts sampled from 40 local authorities.	England and Wales
Patterson and 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 various secondary data sources and available official statistics.	England and Wales
Clark (1997)	Improved value for tax payers and improved monitoring reported in a majority of local governments (no estimates for effect size provided).	Not discussed.	Descriptive analysis of survey data (collected in 1996) 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.	Tight and cost-focused contracting policies.	Retrospective longitudinal study for the period 1980s-1990s based on qualitative data from four city	England

	Loss of staff engagement and motivation. Loss of skills and local knowledge		councils.	
Jang (2006)	No difference in overall expenditures for park and recreation services between municipalities contracting out all services to profit-seeking firms and municipalities providing services in-house. Lower expenditure on services found for 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.	Statistical analysis (OLS regression with controls) of available register and secondary survey data (year 1997) from 1055 municipalities.	USA
Lindholst (2008)	Improved technical efficiency (34%) and improved managerial effectiveness in the initial implementation of contracting out. Thereafter only small cost effects in additional procurements.	Abolition of former in-efficient in-house organization. Stronger management instruments ('high powered incentives').	Embedded (longitudinal) case study of development in the period 1998-2006 of contract management in one state authority based on quantitative (accounts) and qualitative (interview) data for six maintenance contracts.	Denmark
Nuppenau (2009)	Internal 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 and adaptive organizational change process. Exposure to competitive pressures drives change.	Retrospective longitudinal case-study based on interview data of marketization in the period 1980-2005 six municipalities with different characteristics.	Denmark
Lindholst <i>et al.</i> (2015)	Improved technical efficiency. Decreased allocative efficiency. Increased control orientation in management. Limited outlook on service provision and development in planning and management	Institutionalization and domination of a 'technical language', based on standardizations for defining and managing services.	Case-study of the use of service standards based on analysis of existing literature / studies.	Denmark
Bretzer <i>et al.</i> (2016)	Average cost saving around 2 % found for 39 cases. Unchanged or increased costs are more likely outcomes than cost savings. The likelihood for cost savings is greater the first or second time services are contracted out compared to the third time or more	Some indication that cost savings of contracting out are more likely in metropolitan areas (compared to rural) and in municipalities with high spend per capital on services.	Descriptive statistical analysis with simple tests based on survey data (year 2015) of park maintenance services from 115 municipalities.	Sweden
Leiren <i>et al.</i> (2016)	Substantial increases in cost levels. Lower satisfaction with the performance of private	Private contractors are mainly used for provision of services	Descriptive statistical analysis with simple tests based on survey data	Norway

	contractors compared to in-house provision for cost, development and long term objectives. Similar satisfaction levels for quality, flexibility and follow-up and problem-solving.	municipalities cannot provide themselves, i.e. not for assuring low costs (or other purposes). Competition is weak in some regions.	(year 2015) on park (and road) maintenance services from 95 municipalities.	
Dempsey <i>et al.</i> (2016)	High degree of satisfaction with cost and quality of private provision.	Some indication that higher satisfaction with cost are correlated with using contractors to achieve cost efficiency well as higher satisfaction was reported for municipalities with higher levels of contracting out	Descriptive statistical analysis based on survey data (year 2015) on park (and road) maintenance services from 103 local governments.	England

Note: Table based on a literature search on outcomes from contracting out park and green space maintenance.

TABLE 2. Qualitative summary of reported instances of positive, neutral or negative outcomes from contracting out park and green space maintenance

Outcome	Positive	Neutral	Negative
Economic (11 studies)	8	3	1
Service (8 studies)	1	4	4
Management / organization (5 studies)	5	0	2
Staff (5 studies)	1	0	5

Note: A study can report more than one type of outcome as well as both positive, neutral and negative outcomes (i.e. the sum of positive, neutral and negative outcomes can be greater than the number of studies). Relative frequencies are not calculated due to the low number of studies.

TABLE 3. Summary of reported associations between four types of contracting outcomes and hypothetical explanations

Explanation	Economic	Service	Management / organization	Staff
Introduction of competition	+	÷	+ / ÷	÷
Private ownership / management	+	÷	+	÷
Shift toward lower service levels	+	÷	-	-
Low costs as government objective	+	÷	-	÷
Change in managerial thinking / tools	+	+ / ÷	+	÷

Note: Table based inspection of explanations for outcomes provided in 13 studies of contracting out grounds maintenance.

Legend: + = mainly positive association, ÷ = mainly negative association, - = no association reported, + / ÷ = highly mixed associations reported