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**Contracting-Out Public Services
and Public Procurement for Innovation:
Revisiting Contracting Limits in Estonia and Beyond**

VEIKO LEMBER

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TALLINN UNIVERSITY OF TECHNOLOGY
Faculty of Social Sciences
Department of Public Administration
Chair of Governance

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Supervisor: Professor Dr. Wolfgang Drechsler, Tallinn University of Technology, Estonia

Opponents: Professor Dr. Pertti Ahonen, University of Tampere, Finland
Dr. Ringa Raudla, Tallinn University of Technology, Estonia

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Declaration: Hereby I declare that this doctoral thesis, my original investigation and achievement, submitted for the doctoral degree at Tallinn University of Technology has not been submitted for any other degree or examination.

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LIST OF ORIGINAL PUBLICATIONS

The dissertation is based on the following original publications:

I Lember, Veiko. 2004. "Limiting Aspects of Contracting Out in Transitional Countries: the Case of Estonian Prisons." *Public Administration and Development* 24 (5), 425-435.

II Lember, Veiko and Veiko Vaske. 2009. "Public Procurement in Post-Transitional Context: The Case of Estonia." In K.V. Thai (ed.). *International Handbook of Public Procurement*. Boca Raton, FL: Taylor & Francis Group, 409-426.

III Lember, Veiko, Tarmo Kalvet and Rainer Kattel. 2010. "Urban Competitiveness and Public Procurement for Innovation." *Urban Studies*, in press.

APPENDIX

IV Ruoppila, Sampo, Veiko Lember, Wolfgang Drechsler, Ilpo Kauppinen, Niina von Hertzen, Esko Kiiski, Sulev Mäeltseemes, Mikk Lõhmus and Sulev Lääne. 2007. *Possibilities of Joint Public Services Provision between the Cities of Helsinki and Tallinn*. Research report to the cities of Helsinki and Tallinn. Helsinki and Tallinn: NetEffect Ltd and Tallinn University of Technology. Available at <http://www.tallinn.ee/est/g2402s31151>.

V Lember, Veiko. 2006. "On the Importance of Ex Ante Analysis in Implementing Contracting Out: Lessons from the Estonian Emergency Medical Service." In: K. Staranova, W. Dunn and S. Pushkarev (eds). *Implementation: the Missing Link in Public Administration Reform in Central and Eastern Europe*. Bratislava: NISPAcee, 111-124.

VI Lember, Veiko and Kenneth Kriz. 2006. "Purchase-of-service Contracting in Estonia." In Gustavo Piga and Khi V. Thai (eds). *2nd International Public Procurement Conference (IPPC) Proceedings, Rome 21-23 September 2006*. Rome: IPPC CD-ROM.

INTRODUCTION

Scope and aim

Employing private-sector resources for public goals is by no means a new phenomenon, neither in Estonia nor in other countries. Constantly changing, however, and occasionally rediscovered are the understanding and concepts of what exactly constitutes public-private cooperation, what this cooperation should aim at and what kind of results are to be expected to arise from the cooperation. Cross-sectoral cooperation and partnership ideas have been developed under a variety of different concepts such as privatization, policy networks and public-private partnerships, and the answers to these questions have changed accordingly. The last two decades of the twentieth century first witnessed a growing reliance on neo-liberal ideas of privatization and market-type contracting, which were also introduced to the transitional and developing countries (Kettl 1993; Savas 1987; Nemeč 2001). Then, partly as an answer to the poor results from privatization initiatives, but partly influenced by collaboration theory, the emphasis was put on more collaborative cooperation mechanisms labeled public-private partnerships or networks (Hodge and Greve 2005; Kickert *et al.* 1997; Linder 1999; Lowndes and Skelcher 1998; Rosenau 1999 and 2000). Today one can see a mix of contractual as well as institutional cooperation mechanisms being implemented, but overall the ideological milieu in which the governments operate has become more state-oriented (Drechsler and Kattel 2009; Pollitt and Bouckaert 2004), and due to the current global crisis even more so than before (Drechsler 2009).

Against this background, new initiatives for cross-sectoral cooperation have evolved. Public procurement for innovation (PPfI) is among the latest partnership initiatives, which has only recently been (re)discovered by the scholarly community, and has thus far received only limited attention within innovation¹ policy studies and almost no attention within the PPP and public administration context.² PPfI is a special form of public procurement that occurs

¹ The concept of innovation has a rather controversial meaning in the field of public administration. Being used for all sorts of different phenomena, the innovation concept has been accused of being yet another “Vital but Vague” concept in public administration (Pollitt forthcoming). According to Drechsler, the concept of innovation is entirely misused in the current public administration debate, being nothing more than just a cliché: “Innovation is about profit, and the task of the state is neither to make money, nor to save it, but – as one aspect – to see that it can be, and is, made.” (2009, 10). The concept of innovation in this sense originates from Schumpeterian economics (*ibid.*) and is directly related to a process labeled ‘creative destruction’ where new technologies, skills, industries etc. replace the old ones.

² The influence of public procurement on new technologies and research and development has been widely discussed in the defense industry studies, however (see

when a public agency acts to purchase, or place an order for, a product – service, good, or system – that does not yet exist, but which could probably be developed within a reasonable period of time, based on additional or new innovative work by the organization(s) undertaking to produce, supply and sell the product being purchased (based on Edquist and Hommen 2000, 5). It has by now, for the first time, emerged on policy agendas in the European Union as well as in many European countries (e.g. the United Kingdom, the Netherlands, Spain, Ireland) (ECEG 2005; Edler and Georghiou 2007).

There is, however, a problem that has been largely overlooked in the current academic debate, namely whether the problems inherent to contracting and partnership in general can be overcome in the case of PPfI: as PPfI is a novel policy area for most European countries, little is known regarding what kind of challenges it would pose to public administration if the initiative was to be implemented on a larger scale. This question is especially important for countries such as Estonia, where the overall policy coordination and capacity are problematic to begin with (Tönnisson and Randma-Liiv 2008). The current academic discussion on PPfI, which is being held within the innovation policy discourse, has largely ignored the essence of the problems common to contracting and partnerships in general.³ It is often simply assumed that PPPs and contracting are the optimal solutions for delivering the innovation policy initiatives (OECD 2009; Radosevic 2009). Some treatments⁴ do go further and acknowledge the scope of implementation problems, but overall, the implementation aspects affecting the delivery of innovation policy and especially PPfI are left without proper attention. It can be very well the case that PPfI is just another new and fashionable initiative resulting from a promising theoretical idea, but that may not live up to expectations once the initiative is to be implemented on a large scale. This may indeed be predictable if only to look at the historical record of contracting out (CO).

CO can be regarded as a situation where governments define “what services are to be available and to what standard”, and then delegate the actual provision of public services to third parties (Skelcher 2005, 351, but see also e.g. Domberger 1998; Greve 2007; Kettl 1993). At first glance, PPfI and CO represent two

Ruttan 2006 for an overview). But as James explains „Unfortunately, however, there is a disconnection between the mainstream literature on innovation, and the community of specialists working on defence R&D issues” (2009, 451).

³ This aspect has also been discussed by Karo and Kattel (2009) who claim that regarding innovation policy “we can witness a rather evident over-generalisation or simplification of the role of politics and policy-making ... and consequently no significant differentiation is made between political choices over policies and the ability to implement policies.”

⁴ See e.g. Stiglitz and Wallsten (1999) on public-private technology partnerships, ECEG (2009) on PPfI and risk management, Rolfstam (2009) on institutional analysis of PPfI, and Edler and Georghiou (2007) on the PPfI implementation framework.

different streams of thinking, but they actually share many common features. Although PPfI has clear partnership features like risk-sharing and openness to unexpected solutions (see Hodge and Greve 2007), both of the mechanisms represent a classical contracting situation, which rely on mutual agreements between public and private sectors. In most cases these are legally enforceable contracts, which may or may not result from public procurement processes. When contracting for public services or procuring new technological solutions, the government and provider are jointly responsible for producing goods and services. The government, in return for delivered services or goods, pays the provider the pre-agreed price; in some cases, the payments can also be collected via user-charges (i.e. via concessions).⁵

CO is a widely exploited public-private cooperation mechanism, and by now, it is a firmly established concept in general public administration discussion.⁶ Partly as a result of a global public management reform “hype” (Pollitt and Bouckaert 2004, 24), the CO of public services reached its peak in the 1980s and 1990s, when the contracting ideology was also introduced in the transitional and developing countries (see e.g. Brown 2001; Nemec 2001). However, the introduction of “the age of contracting” (Smith and Lipsky 1993, 1) has led to limited results not only in the developed but also, and probably even more so, less developed countries (Boyne 1998; Brown and Potoski 2003; Greve 2007; Hodge 2000; Milward and Provan 2000; Nemec 2001 and Nemec *et al.* 2005; Van Slyke 2003).

This thesis sets out to explore the potential of PPfI in the light of the experiences with CO initiatives. The dissertation aims at analyzing whether the PPfI initiative that has been launched in so many European countries and promoted by the European Union can avoid the usual traps of contracting. Are there any lessons to be learned from the CO experience and are there any reasons to expect that PPfI will not become yet another reform ‘hype’ that drowns in the implementation mess? Drawing on the original empirical evidence from the national as well as local level governments (using interviews, web-surveys and document analysis), the dissertation focuses on the context of Estonia.

⁵ The variety of specific contracting strategies is wide. For an overview see Albano *et al.* 2006.

⁶ CO of public services is an initiative with a substantial track record – it is a tool that the governments have exploited for centuries and introduced in almost all fields of governments’ activities starting from road maintenance and garbage collection to welfare services and prison administration (see e.g. Domberger 1998; Savas 2005). Today, one can even talk about contracted-out war, where private contractors are often involved in combat confrontations or employed to build up local communities in occupied countries (see e.g. Verkuil 2007).

Estonia and other transitional and developing countries deserve special attention because of their role as policy takers. Estonia is one of those countries that have been enthusiastically reforming their public sectors in accordance to the new and fashionable policy ideas – although more frequently in rhetoric than reality – but often without considering whether its internal structures and institutions are capable of introducing the imported concepts (Tönnisson and Randma-Liiv 2008). CO is one of those reform ideas that is supported by the Estonian politicians and administrators in rhetoric (Tönnisson 2006), but that has not been implemented as a coherent policy and that has led to many failures in Estonia.⁷ The Estonian policy-taker position implies fallacies not only in the administrative reform context, but also in the general policy transfer and learning perspective (Randma-Liiv 2005) and also in innovation policy (Karo and Kattel 2009). It could at least be speculated that PPfI, as being promoted by the EU, could thus easily follow the same path. Although there is no policy developed in Estonia that would target PPfI, the existing national growth and development strategies strongly emphasize the need to support research-and-development (R&D) intensive production (Riigikogu 2007). Moreover, the Estonian Information Society Strategy 2013 explicitly underlines the role of the government as a smart buyer when procuring innovative information and communication technology (ICT) solutions (The Government of the Republic of Estonia 2006). Thus, the Estonian context lends itself well for analyzing the contracting limits for PPfI, because the country has gained some experience with different contracting cooperation mechanisms such as CO and also a certain readiness can be perceived to engage with PPfI.

The thesis touches upon a subject that is very much dependent on the multi-governance context (**II**, **III**). In general, the EU PPfI is considered to be marginal in total public procurement.⁸ The existing analyses imply fragmented demand across purchasing authorities and call for a stronger cooperation on supra-national, national as well as local levels in order to “create markets of a critical size” (ECEG 2005, 5). In this context, the role of local and regional governments becomes crucial. It has been argued that the local and regional governments have a two to three times larger share in total public procurement compared with national governments in the EU (Nyiri *et al.* 2007). At this time, however, no coherent evidence is available to indicate the extent to which

⁷ The latest examples include refuse collection, where as of 2008, 43% of the Estonian municipalities have failed to set up the compulsory competitive tendering system insisted on by the law (National Audit Office of Estonia 2008).

⁸ This evaluation is based on the figures comparing the EU situation with the United States: a) in 2004, less than 1% of the total EU-wide tendered procurement budget was allotted for R&D procurement. The US equivalent was 15%.; b) the EU spends four times less on civilian R&D procurement and 20 times less on defense R&D procurement than the US.; c) low procurement of R&D by – and not financial assistance from – public authorities is the main reason for the existing R&D investment gap between the US and the EU. (ECWG 2006, 10-11).

public procurement for innovation potential is realized at the local and regional levels (see, however, cases analyzed by Binks 2006; Edler *et al.* 2005; Pohl and Sandberg 2005). The PPfI as well as CO policies are directly influenced by the EU and international policy-making, especially when it comes to public procurement and state intervention. Public procurement, being regulated internationally (e.g. the WTO Government Procurement Agreement, the EU directives) as well as on the national level, is a highly regulated area, thus making the local and regional authorities dependent on this multilevel governance system.

The main body of arguments is developed in the three original articles, supplemented by three appended ones, dedicated to three central issues of the topic – CO (**I**, appendices **V**, **VI**), public procurement (**II**, appendix **IV**) and PPfI (**III**). The article “Limiting Aspects of Contracting Out in Transitional Countries: the Case of Estonian Prisons” (**I**) gives an in-depth look into the contracting-out initiative and more specifically analyzes the limits of contracting-out in the context of a transitional society. This article, together with the added studies of the “Importance of Ex Ante Analysis in Implementing Contracting Out: Lessons from the Estonian Emergency Medical Service” (appendix **V**) and “Purchase-of-service Contracting in Estonia” (co-authored with Kenneth A. Kriz) (appendix **VI**), serves as a starting point for the thesis. Although the specific cases are on Estonia, the examples of emergency medical aid, welfare services and, especially, the prison service lend themselves well for making more general conclusions due to the fact that all cases represent so-called ‘soft services’, which tend to have more similar market and public sector imperfections in developed as well as transitional and developing countries. The second article “Public Procurement in Post-Transitional Context: The Case of Estonia” (**II**) (co-authored with Veiko Vaske) studies the current situation of public procurement in Estonia. Public procurement is not just another common denominator of CO and PPfI, but is a mechanism that to a large extent affects the outcome of both initiatives and therefore deserves a closer look. As public-procurement legislation in the European Union member countries is to a large extent prescribed by the European Union and the PPfI policy is directly dependent on that legislation, the case study helps to clarify the PPfI situation in Estonia as well as in the EU. The third article, “Urban Competitiveness and Public Procurement for Innovation” (**III**) (co-authored with Tarmo Kalvet and Rainer Kattel), deals with the question of public procurement for innovation. The study analyzes the current state of affairs and the potential of PPfI based on the example of six Nordic-Baltic metropolises (Copenhagen, Helsinki, Malmö, Riga, Stockholm and Tallinn), drawing conclusions on the subject-matter relevant for the Western as well as Eastern part of the Baltic Sea. Cross-border cooperation between public authorities for implementing joint public procurement is among the key topics that is studied in detail in the paper on the “Possibilities of Joint Public Services Provision between the Cities of Helsinki and Tallinn” (**IV**) (co-authored with Ruoppila, Drechsler, Kauppinen, von

Hertzen, Kiiski, Mäeltseemes, Lõhmus, Lääne), exploring the potential of resource pooling on the municipal level in Europe. This is especially relevant for the future of PPfI as aggregation of demand is one of the key factors in PPfI policy-making.

The introductory part of the dissertation develops as follows: The first sections set the overall scene of the thesis by giving an overview of public-private partnership (PPP), public procurement for innovation (PPfI) and contracting-out (CO). In these sections, the role of contracting as part of PPPs is discussed and more importantly, a case is made for introducing PPfI as a distinctive form of PPP. In section four, the main lessons from CO to PPfI are drawn, building on the findings from the original empirical articles. The concluding part summarizes the main findings of the thesis.

1. Public-private partnerships

PPfI has a long history in countries such as Japan, South Korea and especially in the US, but it has been a neglected issue in the EU context (ECWG 2006, see also p. 5 note 2 above). This does not necessarily mean that public procurement in Europe has never influenced the industrial innovation before (see Edquist *et al.* 2000), but it has been neglected as a distinctive policy tool. Up until recent years, public procurement was not seen as a strategic instrument for promoting innovation and economic growth in the EU nor in Estonia specifically (II, III). As argued above, the academic discussion, with some exceptions, has followed the same path. However, the recent changes in regulation and also rhetoric mark the beginning of a new era in the EU public procurement policy-making.⁹ Public procurement is not seen anymore as just a vehicle for creating and developing a single market, but as a direct and effective way of how the public sector, together with private partners, can contribute to economic growth. In other words, PPfI may indeed be an emerging form of PPP.

As argued at the beginning of the introductory part, on the conceptual and ideological level, the meaning of PPP seems to be variable and not well understood (Pollitt 2003). On the one hand, there is the understanding that PPP is nothing more than just a softer version of the privatization movement, which was introduced to retreat from the radical privatization programs such as load-shedding and asset sales (Greve and Hodge 2005; Linder 1999; Savas 2005).

⁹ In 2004, a new package of EU public procurement directives came into force, including new methods such as competitive dialogue favoring PPfI. In February 2009 the EU Parliament voted on a resolution strongly supporting the Commission's communication on pre-commercial public procurement, which indicates the interests of the key policy-making authorities on the European level (see http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=4763). Simply put, pre-commercial procurement refers to products not yet commercially available on the market (see also ECWG 2006).

PPP is seen as an ideological tool that seeks to diminish the role of the public sector and make it more market-like (Savas 1987; 2005). In other words, under these premises, the government ought to rely more on competition-driven contractual transactions (i.e. on horizontal integration) instead of being organized through hierarchies (i.e. vertical integration). Here the design-build-operate types of PPPs (also known as Private Finance Initiatives) are considered another form of contracting together with contracting-out, vouchers and other tools (Greve 2007).

On the other hand, contrary to the idea of privatization, it is said that PPP is a “different set of conceptual premises altogether” (Linder 1999, 36). Thus, it is the cooperation not competition and adversarial relationships that hallmarks PPP and where the “disciplining mechanism is not customer exit or thin profit margins but a joint venture that spreads financial risks between public and private sectors” (ibid.). Here the notion of partnership refers to the concept of networks, i.e. a separate governance mode that stands in between hierarchy and market (Kickert *et al.* 1997). The idea is not to diminish the role of the government, but rather to introduce an alternative *modus operandi*, which works under different conditions as opposed to hierarchy or market. Risk-sharing and long-term commitment are the key-words here, thus excluding competition-based short-term contracting from the list of PPPs (Greve and Hodge 2005; Greve 2007). Here, the design-build-operate types of PPPs together with organizational partnerships (i.e. mixed companies) and policy networks are considered as distinctive collaboration forms and not as Linder puts it “derivative of privatization” (1999, 36).

On the managerial level, the above-mentioned separation between privatization and partnerships as different sets of conceptual premises becomes blurred. It has been argued that partnerships are never entirely dominated by the network mode of governance and that in different phases of its life-cycle, partnerships pass through different dominating governance modes (Lowndes and Skelcher 1998). The cycles are described as follows:

- *Pre-partnership collaboration* is characterized by a network mode of governance based upon informality, trust and a sense of common purpose.
- *Partnership creation and consolidation* is characterized by hierarchy based upon an assertion of status and authority differentials and the formalization of procedures.
- *Partnership programme delivery* is characterized by market (or quasimarket) mechanisms of tendering and contract, with low levels of cooperation between providers.
- *Partnership termination or succession* is characterized by a re-assertion of a network governance mode as a means to maintain agency

commitment, community involvement and staff employment. (ibid., 320).

This implies that there can be partnerships that are to a large extent dominated by the contracting mode. There are many complex service partnerships, for example, the prison partnerships, where this is indeed the case (I).

For that reason, PPP is understood in its widest sense in this thesis, referring “to the ways in which government and private actors work together in pursuit of societal goals” (Skelcher 2005, 348). The initiatives under this definition include public leverage programs, contracting-out, vouchers, franchising, joint-ventures and strategic partnering (ibid.). From a partnership viewpoint, the difference between these initiatives can be found in contracting strategies, which combine competition as well as collaboration elements (VI). At one extreme, there is competitive contracting, where there is little room for trust and where the contractor’s behavior is ex-ante highly regulated (DeHoog 1990). On the other end, there is negotiation-based and relational contracting, where – due to the high level of uncertainties – the liabilities and rights are loosely defined, and where mutual trust dictates the collaboration (ibid.). Therefore, it is suggested here that PPPs could be perceived as special cases of contracting that are affected by competition as well as collaboration elements (see also Greve 2007). In reality, it is the service conditions, market situation and policy-making context that influence the nature of the contracting strategies and thus the nature of partnerships. This suggestion is supported by the empirical evidence from Estonia, where the local as well as central governments often formally follow the competitive contracting principles when contracting for welfare and social services, but in reality, it is the collaborative cooperation that dominates the contracting relationships (V, VI).

2. Public procurement for innovation

There are important aspects that demonstrate PPfI as being a potentially powerful partnership tool.¹⁰ As can be seen from Figure 1, the whole concept of innovation policy is mostly about combining the resources of government with those of private agents. In addition, the aim of the cooperation is indeed delivering societal goals – fostering innovation and economic growth, thus the welfare of citizens. In the case of PPfI, it is about facilitating the creation of new technologies, lead-markets and infant-industries, fostering competitiveness

¹⁰ Stiglitz and Wallsten (1999) also expand upon public-private technology partnership programs, but their study is mostly on supply-side innovation policy measures (see also III). Greve (2007) refers to the US military procurement and Danish welfare-service contracting as being part of the industrial policy, but the treatment does not go into details.

and diversifying the local economy through direct, cooperative or catalytic procurement (III).

The suggestion to consider PPP as a function of different contracting strategies also makes sense from the PPfI perspective. The idea of PPfI is not just to cooperate with the private sector, but to deliver a product or service that meets the public needs (III). In that respect, PPfI differs from supply-side innovation policy measures, which are mostly supportive measures or in the case of e.g. research grants define only vaguely what the private partner has to deliver (see Figure 1). PPfI often, but not always, starts as a collaborative partnership, then turns to competitive contracting and in due course transforms back into collaborative cooperation with end-users. The competitive contracting is most strongly present during the public procurement phases, whereas the collaboration is realized through e.g. the user-provider learning process (III).

The PPfI can be understood as a partnership program that passes different cycles. Pre-partnership collaboration must take place, for example, when the government prepares for catalytic procurement. For that to happen, the government has to seek for a sufficient number of partners (private as well as public) to create a ‘pull effect’, it needs to negotiate with potential partners about the preferences and goals, it ought to carry out technology foresight in a coordinated way etc. During the partnership creation and consolidation phase, the formal procedures are agreed upon. This may include the creation of a special purchasing agency, adopting procedural rules (concerning e.g. transfer of intellectual property rights, risk-sharing or financial obligations) and other aspects.

At the next stage, the partners need to choose between program delivery mechanisms, which are either market-based or semi-market-based. Here the prominent role of contracting (mostly in form of public procurement) becomes evident, as the partners need to make an intelligent decision on how to contract, whom to award the contract and how to evaluate the results. For example, partners may want to combine pre-commercial procurement methods with commercial procurement or complement the procurement activities with research grants or support services such as training. Finally, the partnership leads to termination or succession. In the case of PPfI, the partners may decide to continue with consolidated procurement for new technologies or terminate the cooperation if the new technology has reached the market (or failed to do so).

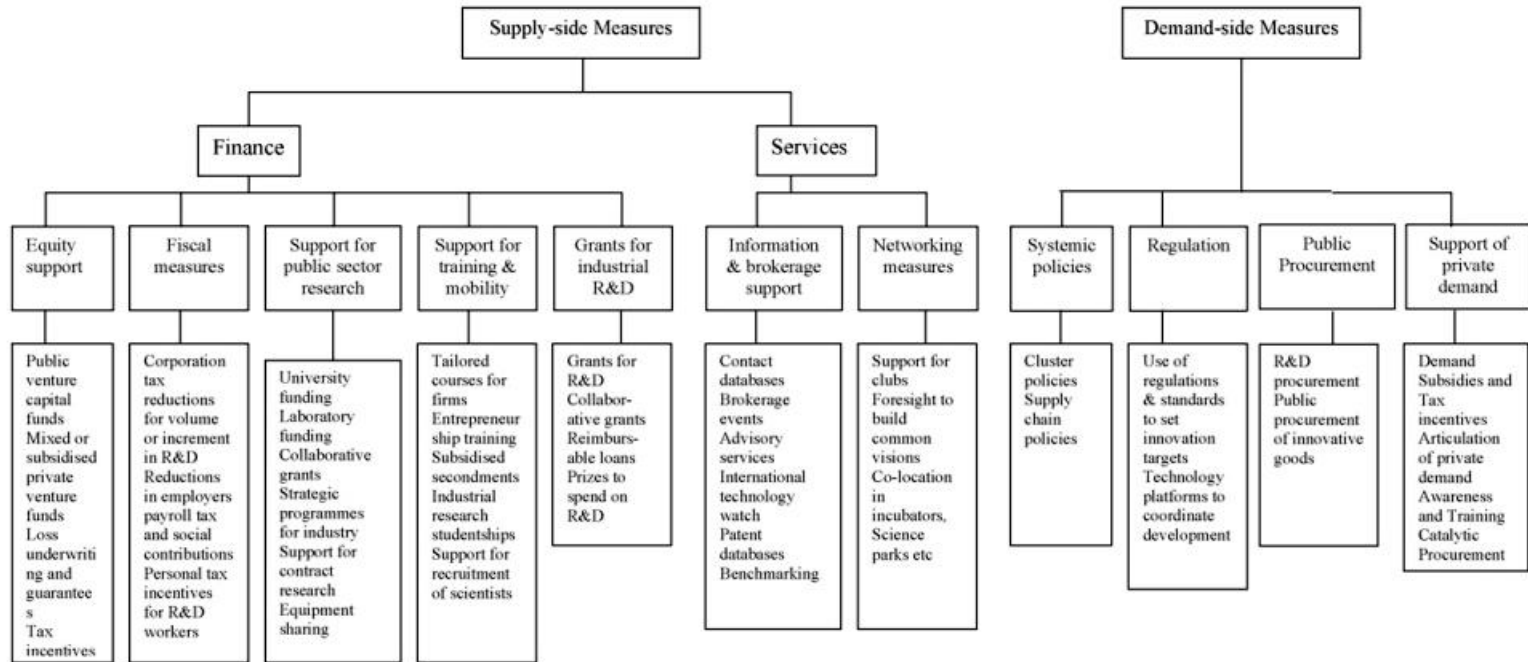


Figure 1. Supply-side and demand-side innovation policy measures (Source: Edler and Georghiou 2007).

3. The limits of contracting

There is no empirical evidence available demonstrating that PPPs have brought along a major progress in public service delivery (Greve and Hodge 2005; Hodge and Greve 2007; Pollitt 2003; Rosenau 1999). This seems to hold both for competition-led cooperation in the 1980s and 1990s and collaboration-dominated partnerships since the 1990s. On the one hand, the effect of the PPPs has been difficult to evaluate, but on the other hand, not enough data has been collected to draw any firm conclusions (*ibid.*, but see also Greve 2007). Rosenau concludes that: “Politics and discourse seem to drive the process” (Rosenau 1999, 10), a viewpoint that very much resembles the conclusions on general trends in modern public management reform (Pollitt and Bouckaert 2004). This raises the question of whether the PPFI initiative is actually able to fulfill the aims of innovation theory. One way to examine this question is to take a closer look into the experiences with CO, which is perhaps the closest partnership form to PPFI and which is capable of explaining to a great extent the overall contracting problems in PPPs.

The logic of contracting is claimed to arise from the classical “make or buy” dilemma (Kelman 2002; Sclar 2000; Skelcher 2005) that follows the original argumentation of Coase on the limits of firms (Domberger 1998). Borrowing from Coase (1937), it can be argued that as using markets for economic transactions entails substantial transaction costs, the hierarchical organizations may be preferred to produce goods and services. At the same time, the hierarchical organizations tend to grow until they reach a point where the diseconomies of scale will develop and hierarchies become inefficient. The balance is to be found when “the costs of organising an extra transaction within the firm are equal to the costs involved in carrying out the transaction in the open market, or, to the costs of organising by another entrepreneur” (Coase 1937, 394).

Influenced by the ideas of the public choice school, the proponents of contracting insist that traditional public organizations are due to informational asymmetries inherently inefficient, and therefore competitive pressure is needed to mitigate the problem (**VI**). But if the competition criteria cannot be met, which is often the case (**I**, **V**), and high transaction costs emerge (Williamson 1996), the alternative contracting mode can be found in relational contracting, where the cooperation is based on stability, collaboration and inter-organizational trust (**VI**, DeHoog 1990; Sclar 2000).

As argued above, the empirical evidence suggests that the results of the CO campaign have been modest at best. This holds for developed as well as for less developed countries such as Estonia. The CO schemes have proven to be highly dependent on context specifics and contracting for similar services brings along

different results in different countries (Hodge 2000; Greve 2007). In general, it has been found that CO works better in cases of technical and quantifiable services, whereas more problems occur with soft and other services involving a wide variety of non-contractable quality factors (Lane 2000; Brown and Potoski 2003, but also **I**, **VI**). This has elicited a greater reliance on relational contracting particularly in welfare services (DeHoog and Salamon 2002). The empirical evidence demonstrates efficiency gains from 6 to 12% mostly in cases of so called ‘technical’ services such as cleaning and refuse collection, but for other services, sufficient empirical information is not available (Hodge 2000). Extensive usage of contracting and lack of adequate data in welfare services was also found to be present in Estonia (**V**, **VI**).

There are many reasons why the CO movement has only had a limited effect on the effectiveness and efficiency of public service delivery. These issues are being discussed in depth in **I**, **V** and **VI**, but also in **II** and **IV**. In short, the cause of the problems is mostly associated with issues such as the limited effect of market competition, difficulties in specifying contracts, acquiring adequate information and monitoring providers’ performance (Kettl 1993; Lane 2000; Van Slyke 2003). In addition, the issues of constitutional limits, accountability and lacking administrative capacity have emerged, which only magnifies the bulk of problems regarding CO and contracting in general (Brown and Potoski 2003; Moe 1992; Van Slyke 2003). The essence of the problem is clearly summed up by Kettl who argues that “Policymakers have often approached indirect government as a self-executing system. They frequently begin with a reverential view of market competition and an assumption that such competition is superior to government monopoly. They assume that leaving things to the market will produce superior services” (2002, 490).

4. Lessons from contracting out for public procurement for innovation

Political and legal limits

The political and legal aspects of CO determine the extent of the government’s democratic sovereignty and its role in society (**I**, **V**). These questions are of growing importance in light of the recent developments in different countries such as the wars in Iraq and Afghanistan, where the occupying allies rely heavily on private armies and other contractors (see e.g. Verkuil 2007), or the prison-privatization trend in general (**I**). In case of political limits, interacting with the market does not depend on economic reasoning or an *a priori* superiority of the market, rather, the market is valued as long as it helps to achieve certain political goals (Hood 1997). The political limits, including, for example, positive discrimination, fulfillment of some hidden goals or ensuring political accountability, act as independent variables in the case of CO. The legal limits occur if a service includes the use of coercion and discretion, or is

critical to the whole society – that is, it has an inherently governmental nature (Dudley 1996; Moe 1992; Moe and Gilmour 1995). Here the role of constitutions, the overall legal environment and courts have an influential part to play in limiting the use of CO. The question of accountability emerges here as a central issue, as CO of inherently governmental functions blurs the idea of political responsibility and often makes it more difficult to maintain a clear chain of political, legal and administrative accountability (Johnston and Romzek 1999; Verkuil 2007). These problems are even more complex in a transitional context as in Estonia (I). Recent court cases demonstrate that the constitutional limits of CO are far from being settled in Estonia.¹¹

At first glance, the question of political and legal limits of PPfI seems to be of somewhat lesser importance. Contrary to CO, the PPfI does not deal with the delegation of state functions, but it is mostly about creating new services, technologies and lead-markets in order to solve social needs and facilitate economic growth. Thus, one could conclude that as long as the goals of innovation policy are met, the process does not have any significant political or legal limitations. Nevertheless, there are aspects which need to be closely examined. Firstly, it is very tempting for the governments to use PPfI as a tool for protecting national industries against foreign competition (i.e. positive discrimination), but this may contradict international and national public procurement and state aid rules, which the governments must follow when procuring commercially ready products (II, III).

Secondly, procuring purely R&D work falls outside of the international agreements on public procurement and usually also outside of national legislation. As this process is not transparent, the question of how to secure clear accountability remains acute. Furthermore, the question of who should be held responsible in cases of failed PPfI – and how – becomes central. PPfI projects are inherently risky and therefore subject to failures. This, in turn, is politically not rewarding and, as Stiglitz and Wallsten have well described, creates a Catch-22 situation: “A program that allocates funds to reward constituencies may be popular, but will be less effective at market failure, whereas a program that attempts to correct a market failure may never develop a constituency and ultimately be cancelled” (1999, 62).

Thirdly, up until recent years, public procurement has been used for other purposes than for supporting innovation (II, III, IV). This single most influential political barrier to PPfI holds especially for Estonia: the political will has simply valued the public procurement tool for other reasons. Of course, publicly favoring one political goal does not automatically mean that some other, hidden, goal is not pursued. There are many successful PPfI cases in

¹¹ In 2008, the Supreme Court of Estonia declared provisions of the Public Transport Act allowing private legal bodies to fine travelers without permission to use public transport unconstitutional (The Supreme Court of Estonia 2008).

Europe implemented under the old EU public procurement regime that benefited to a large extent from the economic development of the European countries (Edquist *et al.* 2000). There are also well-known international examples where technology procurement has been used for ‘amoral’ goals – in the Iran-Contra affair, the US government secretly bought and then sold missiles in order to finance different political ventures (Verkuil 2007). The empirical evidence suggests that political support for complicated PPfI projects is a necessary precondition for success in Estonia as well as other countries, but it also reveals that the European countries and cities are not keen on launching high-risk technology procurement projects (ECEG 2005; ECWG 2006; Nyiri *et al.* 2007; **III**).

Thus, political and legal aspects are also powerful limiting factors in the case of PPfI. Their scope remains, however, open to discussion. The empirical evidence suggests that low awareness among stakeholders rather than political or constitutional obstacles should be addressed in the first place (**III**). On the one hand, the political will has been against using public procurement funds for innovation in Europe and Estonia, but on the other hand, the recent changes on the EU and national levels demonstrate that the prevailing view can be changing.

Economic limits

CO experiments indicate that employing horizontal integration instead of hierarchies has its clear downsides, which are often related to the lacking administrative capacity of government (**I, V, VI**). It was the firm viewpoint of the early proponents of CO that competition automatically takes care of the problems common to bureaucratic hierarchies and that the contracting process is capable of governing itself. Now, after weighing the empirical evaluation of the experience with CO, one can argue that competition does not take care of contracting problems, but on the contrary, effective contracting has become essential to mitigate the problems associated with imperfect market conditions and uncertainty (Brown and Potoski 2003). This connection can also be found in Estonia and other transitional countries (**I, V, VI**).

There is a rather wide academic consensus that the main problems of CO are dependent on the market situation and the nature of contracted services (Boston 2000; DeHoog 1996; Domberger 1998; Hart *et al.* 1997; Kettl 1993; Lane 2000; **I; VI**).¹² The strong market competition – in the form of either strong competition for the contracts or effective ex-post competition – ought to alleviate the adverse selection and moral hazard problems that arise if the

¹² The analytical tools used in this section build strongly on the new institutional economics, especially transaction costs analysis and principal-agent theory (e.g. Williamson 1996). See e.g. Ferris and Graddy (1998) or Lane (2000) for public-sector analyses using the tools of new institutional economics.

contracting parties have divergent goals and there is an information asymmetry between them (Ferris and Graddy 1998). However, the competition effect has turned out to work only in limited cases of CO. Mostly it works with simple public services characterized through high-level contractable quality factors that are easy to quantify, observe and measure. If the simple services are offered under the conditions of low market barriers (i.e. entrance costs), short-term contracting becomes possible, which enables the government to easily switch contractors if needed. High measurability and low substitution costs, in turn, diminish the role of transaction costs.

More complex public functions such as prison management, welfare services, education or even warfare seldom meet these conditions. These types of services usually comprise of a large amount of uncontractable quality factors that are difficult to specify and measure, and involve more risks. Moreover, these markets are characterized by high entrance barriers, a relatively small pool of potential providers (particularly in small and transitioning countries such as Estonia) and long-term contracting. This all increases the probability that the government selects a provider with low abilities (adverse selection problem) or that the provider, by using his/her informational advantages, starts acting opportunistically (moral hazard problem). The need to decrease the rate of uncertainty regarding the provider's behavior, in turn, leads to high costs of obtaining the information and preparing the contract, thus increasing the transaction costs. Low administrative capacity only amplifies the problems (Brown and Potoski 2003; Van Slyke 2003). In some occasions, as the theory suggests, the market problems can be overcome by building the partnership on relational rather than competitive contracting (**VI**, see also section 1).

The problems indicated above have also found to be present in Estonia. Based on the example of prisons, it can be demonstrated that long-term contracts, a high amount of uncontractable quality factors, limited competition (for the contract as well as ex-post competition) combined with constitutional limits and lacking administrative capacities makes the partnership option between public and private sectors rather questionable in Estonia (**I**). At the same time, if misinterpreted, the relational contracting can easily lead to a loss of accountability as the evaluation becomes subjective, and no solid conclusions can be made regarding the achieved results (**VI**). In addition, as argued above, there are many examples in Estonia demonstrating ongoing problems or even failures in contracting for 'technical' services such as emergency medical services, ferry line operations, parking enforcement and property management (see also **V**).

Interestingly enough, one of the main virtues of PPfI is seen in its competitive nature. Public procurement is valued among other innovation policy measures because it offers the option to employ competition between different suppliers and thus avoids the usual traps of picking 'national champions' (Ades and Di

Tella 1997; **III**).¹³ However, drawing from the experience of CO, one can have serious doubts on the possible effects from competition. It can be argued that in PPfI, the competition is even more limited and that the principal-agent problems are even more severe compared to CO. Searching for providers capable of developing innovative goods and products itself limits the number of potential providers compared with the situation when ‘off-the-shelf’ solutions are searched for. PPfI usually requires contractors with R&D capacities, which diminish the number of potential contractors even further. When procuring innovative solutions, the government has only a vague idea of what it wants to buy and how to evaluate the provider’s efforts, thus creating more opportunities for opportunistic behavior on the provider’s part. Although the PPfI contracts may be rather short-termed (**III**), the substitution costs can be expected to be higher than in usual procurement due to high contract preparation costs. The logical step would be to engage with relational contracting, but there are clear limits to that as PPfI entails more risks than contracting for ‘off-the-shelf’ solutions, which gives the contractor an additional incentive to act opportunistically. Also, the costs for obtaining information to mitigate uncertainty are expected to be higher.

At the same time, counter-incentives exist that can diminish the role of ineffective competition and uncertainty, and thus make PPfI a suitable candidate for relational contracting. These incentives are to be found, among others, in future market outlooks, risk-sharing and the influence of mutual learning. Compared to other innovation policy tools (see Figure 1), the effectiveness of PPfI is associated with the user-provider interaction and mutual learning (**III**). Throughout the procurement process, the provider has direct access to the end-users, thereby getting constant feedback as a form of input for the development work. This, in turn, should minimize the delivery risks. Furthermore, PPfI as such is a tool to socialize financial risks of innovative providers: the government absorbs all or some of the financial risks of developing innovative products. In the case of pre-commercial procurement, the government can go even further and take in some technology risks as well (ECWG 2006). Thus, in PPfI, the risks are not unilaterally transferred to providers (as is mostly the case with CO), but the risks are shared. Compared to CO, it is the future market prospects that motivates the provider to cooperate with the government. With the help of public procurement, the provider can become a leader in a newly created market or use the obtained intellectual property rights of the newly

¹³ In order to foster radical innovation, the ECWG (2006) has developed a three-stage approach of pre-commercial public procurement, which is also based on the competition. To a large part, however, this has been developed because of the need to comply with the EU state aid rules (*ibid.*). PPfI for radical innovation refers to “probably science-based products and services, for which limited scientific knowledge and information exist. ... [and] if the technical problems are resolved and the market takes off both the company and the economy will benefit from very high private and social returns on investment.” (Edler *et al.* 2005).

created technology to enter the (foreign) market. The future market outlook can be made stronger if the government engages in cooperative or catalytic procurement with other public authorities or private demanders. And last but not least, tight competition as such may not even be desirable, as it reduces the innovators' prospective rents and therefore may reduce the incentives to invest in innovation (Cabral *et al.* 2006).

Whether these incentives are strong enough to avoid the usual problems of contracting in the future PPfI policies remains to be tested. The preliminary results on local government PPfI indicate that this may not entirely be a lost cause, both for the developed and less developed countries (III). The evidence shows that the number of competitors varied greatly in the case of urban PPfI case-studies and did not seem to affect the outcome as much as other aspects such as low awareness among stakeholders. Catalytic procurement implemented by the City of Stockholm demonstrates clearly that the future market outlook may act as the single strongest incentive for a private provider to act in accordance to the interests of the procurer even in technologically demanding cases. In Stockholm, there was a strong case made for the future market outlook by gathering together a large pool of potential buyers.

Regarding Estonia, it can be argued that demand aggregation may become one of the barriers for the future PPfI initiatives. Estonia is a small country where the local governments have limited demanding power and where the markets are also minimal. If radical, rather than incremental, innovation (see Abernathy and Utterback 1978) was targeted, then cross-border cooperation would become almost inevitable. At the same time, based on the case-study on Tallinn and Helsinki, the capitals and main business centers of Estonia and Finland respectively, there is very low readiness for cross-border cooperation in public procurement (VI).

Article III also found that PPfI assumes a rather high level of existing competitiveness in a region in order for the procurement to become a realistic innovation policy tool. This suggests that the PPfI policy may produce better results where there is already a variety of capable partners to cooperate with. Based on III, it can be hypothesized that competitive regions are more likely to benefit from PPfI in terms of radical innovation. Thus, it can be expected that in the near future, PPfI initiatives in Estonia and its local governments will affect mostly incremental innovation with less risks.

Administrative limits

Administrative capacity is a controversial issue that has been overlooked not only in the PPfI debate but also in the CO discussion (see Brown and Potoski 2003). It is often just assumed that the government has to act as a smart buyer without considering whether it *actually is* or *could become* one. Painter and

Pierre (2005) distinguish between three levels of capacities – state capacity, policy capacity and administrative capacity. They consider effective resource management as the main indicator of administrative capacity that must aim at promoting public values such as economy, efficiency, responsibility, probity and equity. These values can be achieved through a well-functioning support system in terms of civil service systems, territorial organization and delegation, public expenditure management, audit and inspection.

For CO, the main obstacles for effective resource management (or implementation) arise from the contracting process as such. In replacing the traditional hierarchical relationships with market-based interactions, the problems of principal-agent relationships and transaction costs immediately emerge. These problems are magnified if there is limited competition among vendors, if the contracting relationship is full of information asymmetries and uncertainty (i.e. the vendors have the information advantage) and in case there are many uncontractable quality factors involved, which makes it hard to specify and monitor the contract (see Brown and Potoski 2003). In order for the government to act as a “smart buyer”, i.e. to know what to buy, who to buy it from and what has been bought (Kettl 1993, 180), the main capacities needed, thus, include contracting skills (selection, negotiation, writing, monitoring and evaluation), managerial skills (negotiation, conflict resolving, communication etc.) and financial management and accounting skills (to control the flow of funds) (Kettl 2002, but see also Domberger 1998; Sclar 2000). Brown and Potoski (2003) distinguish between feasibility assessment capacity (market analysis, legislative study etc.), implementation capacity (bidding, selecting, negotiating) and evaluation capacity (collecting performance information, audits etc.).

Regarding Estonia, there seems to be a systematic problems with contracting capacity (**I**, **II**, **IV**, **V**, **VI**), which reflects the observations made in other studies (Tönisson and Randma-Liiv 2008).¹⁴ More importantly, access to proper training, which would alleviate the problem, is very limited, and there are no signs of developing a coherent public training policy on contracting matters (**II**).

This situation poses a challenge for future developments in PPfI – how can the government introduce public procurement as an innovation policy tool if it lacks the proper contracting capacity? In short, PPfI is found to suffer from many of the above-mentioned capacity problems (**III**). In spite of focusing on success-stories, the in-depth analyses of an Estonian and other Nordic-Baltic cities point to severe deficiencies in building proper feasibility assessment capacity, implementation capacity and evaluation capacity:

¹⁴ The contracting capacity problems are also well documented by the Estonian National Audit Office (see **II** and **V**).

- city officials are not aware of the connection between procurement and innovation;
- there are no signs of employing public procurement tools in accordance with the general economic conditions of the region (e.g. using public procurement to increase profits in R&D sectors during a recession);
- market and technology knowledge is small;
- no common practice is being developed regarding the transfer of IPR;
- mostly the cities tend to implement supply-side policy measures;
- there are no signs of coherent training programs for the procurement officials on the issue;
- there is a high reliance on external consultants and experts;
- the officials are not well aware of the possibilities offered by public procurement regulation for supporting innovation.

At the same time there seems to be a lack of coordinated activities to alter the situation, and there are no signs of allocating special local funds to promote PPfI (III).

Thus, at the present moment, the administrative capacity can be perceived as an important limiting factor for the developments of PPfI on local levels in Estonia as well as other countries. To create the needed administrative capacity, one needs to make serious efforts to alter the whole administrative culture. This is especially burdensome in the transitional and developing context, where the countries are struggling to establish functional hierarchies, which are a necessary precondition for a contracting organization.

Summary and conclusions

Public procurement for innovation (PPfI) is one of the latest public-private partnership (PPP) initiatives aiming at supporting economic growth that has been put on the agendas of the EU and European countries. It is a partnership tool that incorporates competition as well as collaboration elements, but which has not yet been tested on a large scale. There is, however, a growing interest in applying the PPfI tool on a larger scale, but the current approaches fail to take into account the importance of the implementation problems that have accompanied the PPPs throughout their existence. In this regard, the current thesis hypothesizes that the PPfI initiatives cannot be effectively implemented without solving the contractual shortcomings common to PPPs.

Drawing on the literature and the Estonian experiences with contracting-out (CO) efforts, it is demonstrated in the current thesis that the PPfI initiative may indeed face the same sort of problems that have caused the failure of so many CO projects. Moreover, the evidence points to the fact that under the current circumstances, the large-scale PPfI initiatives would not be applicable in Estonia if for no other reasons than possible contracting failures. As

demonstrated in the thesis, the usual causes for CO failures – political preferences, undermined legal principles, market problems and low administrative capacity – are clearly present in Estonia. It is held in the thesis that as both – CO and PPfI – represent similar contracting situations (with some important differences), the lesson-drawing from one initiative to another can offer a fruitful alternative for analyzing the future prospects of PPfI. As for political limits, the current thesis argues that as risky PPfI initiatives may not be rewarding for politicians, these projects may easily not be launched in the first place or canceled after initial drawbacks. PPfI, especially when targeting for radical innovation, does not necessarily need to follow the public procurement rules, which diminish the transparency of the process and therefore open up avenues for self-interested behavior and accountability problems. Most importantly, in PPfI, the principal-agent problems are even more likely to occur compared to CO, which may cause the escalation of transaction costs. The low administrative capacity only further deepens the effect of the principal-agent problems.

However, the differences in the nature and logic of PPfI compared to CO may help to avoid these classical contracting traps. The political and especially constitutional limits that are important in contracting for inherently governmental functions play a somewhat lesser role in PPfI than in CO. The principal-agent problems caused by divergent goals can be mitigated if the government is able to make a solid case for future market prospects, socialize, in addition to financial risks, some of the technology risks and becomes an active partner in the learning process. The existing successful PPfI examples found in Estonia as well as in other countries of the Nordic-Baltic region suggest that the local governments are able to use the procurement mechanism as an innovation policy measure. Whether the positive incentives associated with PPfI are sufficient for overcoming the usual contractual traps on a larger scale remains to be tested in future research.

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(All weblinks are valid as of 12 November 2009.)

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SUMMARY IN ESTONIAN

Avalike teenuste lepinguline delegeerimine ja innovatsiooni toetavad riigihanked: lepingulise koostöö piirid Eestis ja mujal

Innovatsiooni toetavad riigihanked on üheks uuemaks avaliku ja erasektori koostöövormiks, mis on tõusnud nii akadeemilise debati kui ka riikide innovatsioonipoliitikate huviorbiiti. Tegemist on olukorraga, kus riik esitab tellimuse tootele, teenusele või süsteemile, mida tellimuse esitamise hetkeks ei eksisteeri, kuid mida on võimalik läbi arendustegevuse mõistliku aja jooksul luua ning seejärel toota, tarnida ja müüa. Koordineeritud poliitikanähtus on läbi taolise hanketegevuse riigil võimalik mõjutada uute tehnoloogiate ja turgude teket, pakkuda kaitset tähtsatele tööstusharudele, mitmekesistada majandustegevust, parandada firmade ning kogu piirkonna konkurentsivõimet. Oma olemuselt on tegemist avaliku ja erasektori koostöövormiga, mis ühendab endas nii konkurentsipõhiseid (sh võistupakkumine) kui ka partnerlusele suunatud (sh riskide jagamine, intellektuaalomandi üleandmine, katalüütilised hanked jms) mehhanisme.

Praegune akadeemiline debatt, lähtudes eeskätt innovatsiooniteooria raamistikust, on selles (taas)avastatud koostöövormis nägemas potentsiaalselt väga mõjusat tööriista riikide innovatsioonipoliitika portfellis. Kuid seda väites on suuresti mööda vaadatud senisest avaliku ja erasektori koostöö kogemusest, mis on suures osas põrkunud elluviimisega seotud takistustele. Olemasolevad innovatsiooniteoreetilised uuringud tihti vaid eeldavad, et riigid peavad omama piisavat võimekust koostöömehhanismide elluviimiseks, kuid ei uuri, kas seda ka tegelikult tekitada suudetakse ning mis seda takistab.

Väitekiri käsitleb avaliku ja erasektori koostööd avalike teenuste lepingulise delegeerimise ja innovatsioonile suunatud riigihangete näitel. Lepingulise delegeerimise näol on tegemist ühe enimkasutatud sektoritevahelise koostöömehhanismiga, mis tulenevalt sarnasest toimimisloogikast võimaldab saadud õppetunde üle kanda seni veel vähekasutatud innovatsioonile suunatud riigihangete konteksti.

Väitekirja aluseks olevad artiklid käsitlevad Eesti, aga ka lähiriikide senist praktikat avalike teenuste lepingulisel delegeerimisel (**I, V, VI**), riigihangete korraldamisel (**II, IV**) ning innovatsioonile suunatud riigihangete läbiviimisel (**III**). Innovatsioonile suunatud riigihangete puhul on tegemist valdkonnaga, kus avalike ressursside killustatus omab otsest pärssivat efekti eeldatavatele tulemustele. Arvestades aga asjaolu, et piirkondlike ja omavalitsuste riigihangete kogukulud Euroopa Liidus ületavad keskvalitsuste vastavat näitajat kahe- kuni kolmekordselt, tuleb just riigi esmatasandis näha üht olulist võtit innovatsioonipoliitiliste eesmärkide saavutamisel. Sestap keskendub väitekiri

lepingulise koostöö probleemide analüüsil nii omavalitsuste (III, IV, VI) kui ka keskvalitsuse (I, II, V) tasandile.

Eesti kogemus avalike teenuste üleandmisel erasektorile näitab, et turumehhanismide kasutamine hierarhilise organisatsiooni asemel ei ole kaasa toonud olulist avalike teenuste tõhususe ja mõjususe paranemist. Poliitiliste eesmärkide vastuolu lepingulise delegerimise loogikaga, muutuv seadusandlik keskkond, vastutuse hajumine, põhiseaduslike printsiipide eiramine, piiratud turukonkurents, volitaja-agendi probleemide esilekerkimine, kaasnevad tehingukulud ja vähene administratiivne suutlikkus lepinguliste suhete haldamisel on peamised faktorid, mis tingivad avalike teenuste lepingulise delegerimise õnnestumise Eestis ja mujal vaid piiratud ulatuses (I, V, VI).

Põhjala ja Balti riikide suurlinnade näitel võib järeldada, et innovatsioonile suunatud riigihanked tõepoolest mõjutavad positiivselt uute tehnoloogiate ja turgude teket ning piirkonna majandusarengut (III). Sellega on justkui loodud soodus pinnas laiahaardelisema poliitika juurutamiseks nii Eestis kui ka mujal Euroopas. Samas, juhtumite süvaanalüüs (III), Eesti riigihangete süsteemi analüüs (II) ning piiriülese koostöö analüüs (IV) näitavad, et lepingulisele delegerimisele iseloomulikud piirangud tõusevad esile ka innovatsioonile suunatud riigihangete kontekstis. Sestap võib ennustada, et tulenevalt avaliku ja erasektori lepingulisele koostööle omastele probleemidele ei pruugi ka suures mahus elluviidud innovatsiooni toetavad riigihanked täita oma eesmärki.

Innovatsioonile suunatud riigihanked sisaldavad endas suuri finantsilisi ja tehnoloogilisi riske, mis teeb selle mehhanismi kasutamise sõltuvaks poliitilise tahte muutumisest. Radikaalset innovatsiooni mõjutada püüdvad riigihanked viiakse tihtipeale ellu väljaspool riigihangete regulatsioone, mistap puuduvad selged mehhanismid läbipaistvuse ja selge vastutusahela tagamiseks ning seadusi ja avaliku huvi eirava käitumise ennetamiseks. Innovatsiooni mõjutamine läbi riigihangete eeldab piisava suutlikkusega ettevõtete ning teadus- ja arendusasutuste olemasolu, milliseid aga väikestes ja vähemarenenud riikides napib. Taolisi hankeid iseloomustab määramatus ja suur hulk informatsioonitakistusi, mis tingib volitaja ja agendi vaheliste probleemide esilekerkimise. Avaliku sektori vähene administratiivne suutlikkus hangete ettevalmistamisel, elluviimisel ja hindamisel üksnes võimendab eelpool kirjeldatud komplikatsioonide mõju.

Samas eksisteerib innovatsioonile suunatud riigihangetel rida omadusi, mis võivad nimetatud probleemide realiseerumist väärata (III). Poliitiliste ja eriti põhiseaduslike piirangute roll innovatsioonile suunatud riigihangete puhul on oluliselt väiksem kui lepingulise delegerimise korral. Eesmärkide erinevusest tingitud volitaja-agendi probleeme on võimalik vähendada, kui riik suudab tarnijale tekitada küllaldase turupotentsiaali, võtta lisaks finantsriskidele enda kanda ka osa tehnoloogiariskidest ning tagada mõjusate kasutaja ja tarnija

vaheliste tagasisidemehhanismide olemasolu. Kuivõrd väitekirja empiirilised tulemused Põhjala ja Balti riikide suurlinnade kohta kinnitavad innovatsioonile suunatud riigihangete positiivset mõju piirkonna konkurentsivõime suurendamisel, siis on alust arvata, et taoliste hangetele iseloomulikud omadused võivad üksikjuhtumite puhul olla piisavad ületamiseks klassikalisi avaliku ja erasektori lepingulise koostöö kitsaskohti. Edaspidised võrdlevad uuringud peavad selgitama, kas sellist mõju on võimalik saavutada ka suures ulatuses ja pikaajaliselt.

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PUBLICATIONS (Articles I – III)

Article I

Lember, Veiko. 2004. "Limiting Aspects of Contracting Out in Transitional Countries: the Case of Estonian Prisons." *Public Administration and Development* 24 (5), 425-435.

Article II

Lember, Veiko and Veiko Vaske. 2009. Public Procurement in Post-Transitional Context: The Case of Estonia. In K.V. Thai (ed.). *International Handbook of Public Procurement*. Boca Raton, FL: Taylor & Francis Group, 409-426.

Article III

Lember, Veiko, Tarmo Kalvet and Rainer Kattel. 2010. "Urban Competitiveness and Public Procurement for Innovation." *Urban Studies* (in press; accepted as of 26 October 2009).

APPENDIX (Articles IV – VI)

Article IV

Ruoppila, Sampo, Veiko Lember, Wolfgang Drechsler, Ilpo Kauppinen, Niina von Hertzen, Esko Kiiski, Sulev Mäeltsemees, Mikk Lõhmus and Sulev Lääne. 2007. *Possibilities of Joint Public Services Provision between the Cities of Helsinki and Tallinn*. Research report to the cities of Helsinki and Tallinn. Helsinki and Tallinn: NetEffect Ltd and Tallinn University of Technology. Available at <http://www.tallinn.ee/est/g2402s31151>.

Article V

Lember, Veiko. 2006. "On the Importance of Ex Ante Analysis in Implementing Contracting Out: Lessons from the Estonian Emergency Medical Service." In K. Staranova, W. Dunn and S. Pushkarev (eds). *Implementation: the Missing Link in Public Administration Reform in Central and Eastern Europe*. Bratislava: NISPAcee, 111-124.

Article VI

Lember, Veiko and Kenneth Kriz. 2006. "Purchase-of-service Contracting in Estonia." In Gustavo Piga and Khi V. Thai (eds). *2nd International Public Procurement Conference (IPPC) Proceedings, Rome 21-23 September 2006*. Rome: IPPC CD-ROM.

CURRICULUM VITAE

Veiko Lember

1. Personal data

Date and place of birth: 29 November 1977, Kuressaare
Citizenship: Estonian Republic

2. Contact information

Address: Akadeemia tee 3, Tallinn, 12618, Estonia
Phone: +372 620 2671
E-mail: veiko.lember@ttu.ee

3. Education

University of Tartu	2002	<i>Magister Artium, Public Administration and Social Policy</i>
University of Tartu	2000	<i>Baccalaureus Artium, Public Administration (minor in Economics)</i>

4. Language skills

Estonian	native language
English	fluent
Russian	average

5. Special Courses

Summer 2008	Intensive Summer Course on Small States and European Integration, Center for Small States Studies, University of Iceland
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6. Professional Employment

2005-	Tallinn University of Technology	Research Fellow
2000-2004	University of Tartu	Research Fellow
2002-2003	Estonian Law Centre Foundation	Financial manager
2001	The Royal Bank of Scotland	Intern

7. Scientific work

Co-ordinator and researcher for several research projects, including

- | | |
|-----------|--|
| 2008-2011 | Governance of executive agencies and public-private partnerships: coordination and control in the Estonian public sector |
| 2008-2013 | Public Administration and Development in Small States |
| 2007 | BaltMet Inno, Survey on Innovation and Public Procurement in Baltic Metropolises |
| 2007 | Tallinn-Helsinki Public Services Survey |
| 2005-2007 | Small States and Development Policies |
| 2002-2004 | Estonian State as a State: Public Policy Analysis |
| 2002 | The Organisational Environment of Information |

8. Defended theses

“The Role of the State in the Estonian Sport System” (*Baccalaureus Artium*)

“Contracting Out in the Public Sector – the Limits and the Case of the Estonian Prison System” (*Magister Artium*)

9. Main areas of scientific work

Contracting for public services, public procurement for innovation, public management, public-private partnerships, sports management

10. Publications

- Lember, Veiko, Tarmo Kalvet and Rainer, Kattel. 2010. “Urban Competitiveness and Public Procurement for Innovation.” *Urban Studies*, in press.
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Available at
<http://www.inno.baltmet.org/uploads/filedir/File/BM%20Inno%20Procurement%20for%20Innovation.pdf>.

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ELULOOKIRJELDUS

Veiko Lember

1. Isikuandmed

Sünniaeg ja -koht: 29 november 1977, Kuressaare
Kodakondsus: Eesti Vabariik

2. Kontaktandmed

Aadress: Akadeemia tee 3, Tallinn, 12618, Eesti
Telefon: 6 20 26 71
E-post: veiko.lember@ttu.ee

3. Hariduskäik

Tartu Ülikool 2002 *Magister Artium, avalik haldus
ja sotsiaalpoliitika*

Tartu Ülikool 2000 *Baccalaureus Artium, avalik
haldus (kõrvaleriala:
majandusteadused)*

4. Keelteoskus

eesti	emakeel
inglise	kõrgtase
vene	kesktase

5. Täiendusõpe

suvi 2004 Väikeriigid ja Euroopa integratsioon, Islandi
Ülikool, väikeriikide keskus, Island

6. Teenistuskäik

2005- 2000-2004	Tallinna Tehnikaülikool	teadur
2002-2003	Tartu Ülikool Sihtasutus Eesti Õiguskeskus	teadur finantsjuht
2001	The Royal Bank of Scotland	praktikant

7. Teadustegevus

Järgnevate teadusprojektide koordinaator/teadur

2008-2013	Avalik haldus ja areng väikeriikides
2008-2011	Täidesaatvate agentuuride ning avaliku ja erasektori koostöö valitsemine: koordinaatsioon ja kontroll Eesti avalikus sektoris
2007	BaltMet Inno Projekt “Innovatsiooni toetavad riigihanked Läänemere suurlinnades
2007	Tallinn ja Helsinki avalikud teenused
2005-2007	Väikeriigid ja arengupoliitika
2002-2004	Eesti riik kui riik: avaliku poliitika analüüs
2002	Informatsiooni organisatsiooniline keskkond

8. Kaitstud lõputööd

“Riik Eesti spordisüsteemis” (*Baccalaureus Artium, cum laude*)

“Avalike teenuste lepinguline delegeerimine: Eesti vanglasüsteemi juhtum” (*Magister Artium*)

9. Teadustöö põhisuunad

Avalike teenuste delegeerimine, riigihanked ja innovatsioon, haldusjuhtimine, avaliku ja erasektori koostöö, spordijuhtimine

10. Täiendavate valitud publikatsioonide loetelu

- Lember, Veiko, Tarmo Kalvet and Rainer, Kattel. 2010. “Urban Competitiveness and Public Procurement for Innovation.” *Urban Studies*, in press.
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TALLINN UNIVERSITY OF TECHNOLOGY
DOCTORAL THESES
SERIES I: SOCIAL SCIENCES

6. **Ülle Madise.** Elections, Political Parties, and Legislative Performance in Estonia: Institutional Choices from the Return to Independence to the Rise of e-democracy. 2007.
7. **Tarvo Kungla.** Patterns of Multi-Level Governance in Europe: The Challenge of the EU's Enlargement. 2007.
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9. **Tarmo Kalvet.** Innovation Policy and Development in the ICT Paradigm: Regional and Theoretical Perspectives. 2009.
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11. **Veiko Lember.** Contracting-Out Public Services and Public Procurement for Innovation: Revisiting Contracting Limits in Estonia and Beyond. 2009.