

Collaborative Public Procurement and Supply Chain; the European Union Experience

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ABSTRACT

Having examined strategic supply management at the levels of the dyad, chain and network in the previous four chapters, in this chapter public procurement provides the opportunity to consider the power available in coordinated and aggregated strategies and policies for supply. Here the authors detail the various directives within the European Union relating to public procurement, showing the significant opportunities within the legislation and regulatory framework for countries, regions and groups of collaborating public bodies to gain benefits from more strategic approaches in terms of innovation, influencing market behavior, value for money, sustainability and support for small and medium enterprises. However, public procurement remains largely fragmented internationally, with some exceptions where Central Purchasing Bodies have been formed, notably in healthcare. The chapter discusses how contracting might be performed nationally, regionally, and locally, sometimes allocating decision-making on different supply chain tasks to different geographical levels.

KEYWORDS

Public procurement, European Union procurement policy, demand-side innovation

INTRODUCTION

Public expenditure for goods, services and works represents a significant proportion of total public spending, reaching 10–15% per cent of gross domestic product (GDP) in many countries across the world. In the European Union (EU), the public procurement market, covering all levels of government and public agencies, is estimated to be worth around one-sixth of total GDP, that is, approximately 2406 billion (Nyiri et al., 2007).¹ It is therefore unsurprising that the ‘Europe 2020’ strategy requires that public procurement policy must ensure ‘the most efficient use of public funds and that procurement markets must be kept open EU wide.’ Obtaining ‘optimal’ procurement outcomes, generally reflected in the term ‘value for money’, through efficient procedures is of crucial importance in the context of the severe budgetary constraints and economic difficulties currently experienced by many EU Member States. As we will see later in this chapter, the objective of public procurement is being broadened to include savings and product performance as well as soliciting innovative solutions, social sustainability goals and economic development policies associated with small and medium enterprises (SMEs). In the face of these challenges, there is a greater need than ever for a functioning and efficient European procurement market that can deliver all of these ambitious goals (Commission EU, 2011).²

The purpose of this chapter is to understand better the relation between National, European and International policies associated with purchasing and purchasing strategy and performance. Consistent with the handbook’s recurring themes, we will consider (1) purchasing or contracting as strategy and (2) strategies associated with effective purchasing by focusing on the current European experience as a result of European Union Policy and its interaction with national and local policies.

The chapter reflects the EU’s 2010 Single Market Act’s³ intention to make legislative proposals, ‘with a view to simplifying and updating the European public procurement legislation, so as to make the award of contracts more flexible and enable public contracts to be put to better use in support of other policies’ (Commission EU, 2011). EU directives deal with public purchasing across many different aspects of public responsibility. One of the largest and growing areas of public spending is healthcare provision which constitutes around 8 percent of many countries’ public spending.⁴ This chapter, therefore, focusses on contracting design to achieve policy and service provision goals as well as effective contracting policies for the health sector across European countries.

A EUROPEAN PERSPECTIVE ON COLLABORATIVE PUBLIC PROCUREMENT

In Europe the public procurement market is covered by specific provisions for the awarding of work, supply and services (Directive 2004/18/EC)⁵ and for procurement in the utilities sector (Directive 2004/17/EC).⁶ Specific provisions, aiming to improve the effectiveness of review procedures concerning the award of public contracts (Directive 2007/66/EC),⁷ are key to improving procurement goals. This set of rules impose a mandate to follow transparent, open procedures ensuring fair conditions of competition for all economic operators (Racca, Cavallo Perin, and Albano, 2011). The directives cover the contracts above a certain threshold that define the European relevance and interest in that contract. The Treaty also establishes a number of fundamental principles that are of general application in the European Union with regard to public contracts outside the scope of the directives (Venckute, 2010a, 2010b).⁸ Increased competition in the market of public procurement could provide considerable benefits for domestic and foreign stakeholders (Arrowsmith and Kunzlik, 2009).⁹ However, an overall vision of how to organize and exploit the strategic power of public spending is still missing; this is, in part, related to a widespread fragmentation of procurement bodies across the public sector. Although the European Court of Justice has ruled that contracts should follow the European principles,¹⁰ around 80 percent of the total amount of public procurement is awarded without complying with most of the rules set by European directives.¹¹ This leads to a fragmentation of contracts of limited value and below the European thresholds, representing a first key factor that limits the creation of a European internal procurement market.

According to recent studies, only 1.6 percent of public contracts are awarded to operators from other member States (Commission EU, 2011). Indirect cross-border participation – via corporate affiliates or partners situated in the Member State of the contracting authority – is more frequent, but remains relatively low (11 percent).

As recently underlined in the European Commission's Green Paper (Commission EU, 2011), public procurement below thresholds can provide significant opportunities for businesses, in particular for SMEs (for an Italian perspective: Bertini and Vidoni, 2007). Yet, it is clear that in many Member States this leads to a closure of the market not only at a National, but often even at a regional and a sub-regional level. At the same time, it seems inefficient, from a transaction cost viewpoint, to conduct hundreds of thousands of low-value contracts, possibly resulting in a large variation of prices for very similar products (particularly for standardized commodities). A new complex approach for a complete and comprehensive vision of the possible strategies of collaborative procuring policies is definitively required (Edler and Georghiou, 2007).

EC Directives 2004/17 and 2004/18 include the possibility of providing new tools such as central purchasing bodies (Caranta, 2008), new contractual models such as framework agreements, electronic auctions, dynamic purchasing systems

and e-procurement systems. All these instruments have usually been transposed into national legislation but are not yet widespread in Europe. The need to increase efficiency and effectiveness in public procurement markets will favor collaborative procurement arrangements and the use of framework agreements to modernize the procurement system (OECD, 2011).¹²

Aggregation of demand can yield considerable positive effects for suppliers and contracting authorities including economies of scale, increased buying power on the part of public authorities and a possibility for them to pool skills and expertise and share the procurement related costs and risks (Commission EU, 2011).

Fragmentation and the role of collaborative purchasing

National governments, local authorities and public organizations, utilities and agencies at any level are still endowed with contractual autonomy and can purchase, independently, according to the international, European, and national rules. This means that a considerable mix of individual procuring efforts can exist within a procurement unit (Burgi, 2010). Entities that carry out single procuring procedures should assure the necessary professional skills and procurement training. The value of these single award procedures can be very limited if we consider, for example, a small rural community. On the contrary, this value can also be very high for an urban city hospital, for example (Racca, 2010b). The procedures implemented can be the same when the value of the purchase is above the European threshold. In both cases there can be attentiveness to the policy mandate to achieve value for money, as foreseen in the contractual document of the single procuring entity (e.g. in construction, transport, education, and healthcare). It is reasonable to assume that small procurement units cannot have highly trained professional skills and the risks and transaction costs of a small number of award procedures can become very high.

This continued and widespread fragmentation of procuring entities hinders an overall vision of public organization strategic power and becomes an obstacle to a complete and comprehensive vision of the possible strategies of public procuring policies (Edler and Georghiou, 2007). The promotion of value achieved through forms of collaborative procurement and professionalism in buying organizations changes the perspective on public procurement, advancing and potentially achieving a deeper vision of the different market conditions and characteristics¹³ and of the possibility to orient innovation or promote sustainability policies.

Many forms of centralized purchasing predated the European Directives and their important legal framework for purchasing. The previous rules on public procurement, however, were concerned only with single award procedures by individual procuring entities. Nonetheless, several Member States realized the utility of coordination of procuring activities in order to deliver the 'best value' in public spending. During the following years the awareness of the need to

coordinate purchasing activities increased and finally was introduced in the European legal framework, thus facilitating a quicker growth of these new opportunities and strategies in public procurement. Directives 2004/18/EC and 2004/17/EC, for example, provided a number of tools for the aggregation of demand, including the central purchasing bodies and other instruments that may be used for this purpose. These include the possibility of using e-procurement and concluding framework agreements that can be joined by several contracting authorities (Arrowsmith, 1999, 2005a, 2006, p. 96–7; Arrowsmith and Kunzlik, 2009; Bovis, 2008; Chard et al., 2008; Edler and Georghiou, 2007; Yukins, 2009, p. 469–89, 2008, p. 546 et seq.; Bowsher and John, 2009, p. 356 et seq.).¹⁴

Various models of collaborative public purchasing strategies are currently being tested and implemented. First, it is recognized that joint procurement is feasible without significant structural change. Contracting authorities can coordinate their procurement activities by simply sharing their experiences or coordinating certain phases of the procurement procedure. Procurements are awarded on the basis of a contract of cooperation between several procuring entities (or ‘contractual model’, see Racca, 2008). This normally leads to a sum of separate procuring procedures or the sum of lots included into them, sometimes with a common elaboration of technical specifications and the estimation of aggregate requirements. Cooperation can also lead to informal agreements for the exchange of information on highly standardized products and their prices (Schotanus and Telgen, 2007; Nollet and Baulieu, 2003; Aylesworth, 2003; Krutten et al., 2005). Collaborative purchasing arrangements between municipalities in a specific geographical area, formally and permanently established, are not unusual in a number of EU Member States. Such arrangements are especially feasible for goods and services that are commonly in demand in all types of municipalities, such as food, fuel, and energy (OECD, 2011).

A Central Purchasing Body (CPB), also known as a Professional Buying Organization (PBO), is a ‘corporate models’ that has the potential to modify the structure and the aims of the public procuring activity. These entities are characterized by their separate legal status (Vogel, 2009; Dimitri et al., 2006, p. 94, 315 et seq.; Bovis, 2008; Arrowsmith, 2009; Knight et al., 2007), as independent agencies or separate limited companies.

CPBs may specialize in the provision of specific goods or services (e.g. medical equipment or information technology (IT) products) and may be able to offer better contracts in terms of prices, quality and delivery conditions than smaller procuring entities would be able to achieve. For example, in the UK the NHS (National Health Service) Supply Chain offers a very high number of framework agreements concerning medical devices, and any NHS trust can voluntarily choose whether or not to use them.

Various combinations of these different approaches to centralised procurement are likely to exist side by side in different parts of the public sector, and until now, together with a large number of decentralized procurement entities (OECD, 2011). In the UK NHS¹⁵, for instance, the nationwide procurement

strategies carried out by the NHS Purchasing and Supply Agency (PASA), an Agency of the Department of Health, until recently coexisted alongside purchasing hubs representing clusters of local hospital trusts, while others engage the private sector to 'outsource' their purchasing activities (West, 2010).

It is generally believed that purchasing agreements can favor both the rationalization and streamlining of the entire supply chain cycle from the definition of requirements to final deliveries. Such aspects are often overlooked and the advantages and savings involved are not considered. Similarly, individual procuring entities often fail to consider the costs associated with the delivery and storage of goods, also related to the provision of the service. The costs of logistical aspects are not clearly defined and often the procuring entity does not realize the exact cost of the product and the logistics service in order to evaluate whether it can be convenient to organize a warehouse or outsource it (Cavallo Perin, 1998; Cavallo Perin. and Casalini, 2009 and 2010; Comba and Treumer, 2010). This is very different from strategic thinking about procurement in other industries where there is frequently a strong focus on the total cost of ownership of purchased goods (Schneller and Smeltzer 2006).

Such evaluations should aim to meet the needs of the public entity through the CPB's use of highly flexible contractual instruments, as open framework agreements concluded with several economic operators/suppliers. These may include additional services that may be particularly advantageous for the recipients dealing with special needs, differing from the standard, such as special logistics requirements, particular characteristics of goods and services, delivery methods, times, different forms of assistance regarding the utilization of goods and costs associated with returns, recalls and product obsolescence (Albano and Sparro, 2010). The different central purchasing arrangements also consider the evaluation of the relevant market, the needs analysis as regards the definition of procurement strategy and the design of a specific award procedure. Furthermore they should not neglect the execution phase and the contract condition connected to the delivery of goods or services or the execution of works (Cavallo Perin and Racca, 2010). The quality of performance and customer satisfaction should be taken into account in the overall evaluation of the public procurement procedure.

Purchasing and innovation

The lack of a demand-side orientation in innovation policy is presently well recognized in Europe and in other countries (Myoken, 2010).¹⁶ Demand-side innovation policies have been defined as 'all public measures to induce innovations and/or speed up diffusion of innovations through increasing the demand for innovations, defining new functional requirement for products and services or better articulating demand' (Edler and Georghiou, 2007). CPBs can play a substantial role as stimulators of innovation for tenderers and for their relevant markets. At the European level the presence of a number of barriers for public organizations to buy innovations is becoming evident. These barriers include a lack of

coordination across purchasing organizations as well as a lack of understanding about how purchasing can drive innovation. Further, the absence of information regarding products and their potential hinders purchasing. To this aim, the EU¹⁷ is promoting European public procurement networks, and recently three new trans-national specialized networks of public procurers¹⁸ have been launched under the European Union's Lead Market¹⁹ to address this issue. The networks will serve the needs of public procurers at all levels – national, regional, metropolitan, and local. A common thread to all these networks will be to increase their market-specific knowledge of the innovative solutions in some of the lead market sectors. This could lead to developing joint or coordinated public procurement actions. This is surely a signal of the importance of cooperation among procurement entities of different member States of the EU.

One activity of networks is to disseminate information among all relevant stakeholders about progress achieved. The choice of creating networks between single procuring entities may lead to noteworthy but limited effects. The choice to involve CPBs in the network has the potential to amplify the results of purchasing both in terms of scale of innovation and with reference to public expenditure policies choices, particularly towards sustainable development. Innovation, market-specific knowledge, and promotion of participation of bidders from different member States can disseminate progress to a larger number of public organizations that adhere to CPB framework agreements (Racca, 2010d; Chard et al., 2008).

THE AGGREGATION OF PUBLIC DEMAND AND THE ROLE OF CPBs

The role of public demand in the market of public procurement does present unique opportunities for member States to pursue strategic procurement policies (Edler and Georghiou, 2007) and influence market behavior (McCrudden, 2007, p. 114 et seq.). These are often neglected due to the fragmentation of procuring entities. The change in public procurement procedure entailed in the activity of CPBs results in the considerable higher overall value and in the further effect of the rationalization of public needs.

Effective procurement process are preceded by a spend analysis, rationalization and prioritization, or a demand review. When a CPB defines the subject matter of a framework agreement it drives public administrations to buy a product or service that might be different from the one they would have bought with an individual procurement procedure. The shift to PCBs also has the potential to influence the relation with the relevant market as a professional buying organization can choose how to design contract documents in order to address a specific market. This can be envisaged by designing smaller lots or single product/service lots to favour SMEs (Albano and Antellini Russo, 2009), including the additional provision of limiting the number of lots/contracts that can be awarded to the same firm.

The above line of reasoning does not imply, though, that the award procedures should remain below the European threshold. Rather it entails the design of award procedures split into several lots that are geographically and quantitatively adapted to the system of the providers, thus fostering participation by SMEs and identifying the territorial level that is optimal for aggregation. It can also ensure the participation of more innovative SMEs, even from abroad.²⁰ With regard to this latter aspect, we may recall that the ‘Small Business Act Europe’ improves the activity of SMEs in accordance with the principle ‘Think Small First’.²¹

In view of the large volumes purchased by these organizations, it has been considered that these techniques can help increase competition and streamline public purchasing (Albano et al., 2007). Networks of CPBs initially at a national level and then around Europe could better enforce such choices and drive the relevant markets.

As already mentioned, in Europe CPBs are created to purchase goods, works or services for other public administrations without themselves having to comply with the public procurement rules.²² CPBs make acquisitions or award public contracts or framework agreements for other contracting authorities (Arrowsmith, 1999). A definition has also been given of the conditions under which, in accordance with the EU principles of non-discrimination and equal treatment, contracting authorities purchasing works, supplies or services through a CPB may be deemed to have complied with the directive prescriptions.²³ The directive provides discretion to choose whether to create CPBs and the choice of how to use these instruments²⁴ to member States. The aim is normally to get economies of scale and scope and limit the transactions costs. Moreover, the substantial purchasing power of the States could facilitate strategic procurement of new, innovative products and services, thereby encouraging the development of new products and markets, as well as the incorporation of secondary considerations (Racca, 2010a).

It is not always easy to impose mandatory regulations on single procuring entities to pursue specific aims, while it could be easier to define objectives of public policies for a CPB or a CPB network. The specific power to choose and implement horizontal policies (Arrowsmith and Kunzlik, 2009) has largely been left to the discretion of each Member State. Recently, however, the Green Paper seems to foresee a future reform of EU procurement rules facing sustainability policies and favour for SMEs.

The instruments for establishing and regulating the activities of the CPBs differ across EU member States. Some of the CPBs in the EU have the legal status of a publicly-owned limited company. Hansel (Finland), Consip (Italy), and SKI (Denmark) are all non-profit limited companies that are partially or totally owned and controlled by their countries’ ministries of finance.²⁵ SKI has, in addition, a second owner that is the Association of Local Authorities, which owns 45 percent of the company. UGAP (France) is a public body with legal personality and no share capital, fully controlled by the State. Others are public bodies, or agencies or public-private partnerships such as NHS Supply Chain in

the UK which has considerable economic independence and a relationship with the German-owned logistics business, DHL (OECD, 2011).

The European e-procurement landscape is characterized by different development models, influenced by the institutional and administrative structure of each country (Gardenal, 2010; Humann, 2010; Karjalainen and van Raaij, 2010; Klemperer, 2002; Munkgaard Møller, 2010). The mandates given to European CPBs can be different and can specify whether the agreements are mandatory or voluntary for the procuring entities. Some countries imposed the adherence to CPBs contracts as mandatory with the aim to encourage and strengthen collaborative procurement (OECD, 2011). A more flexible approach is often adopted, leaving to procuring entities the choice to adhere to a framework contract to procuring entities, based on the evaluation that better conditions are unlikely to be found in on the market. The CPBs have then to demonstrate that they can offer the best value for money. If the procuring entities did not use framework agreements to buy the goods and services they needed, the CPBs would not receive any revenues. This becomes a key point whenever CPBs are funded through service charges. It can be designed such that procuring entities pay a fee when call-offs (second-round efforts) are made, or the fees are paid by suppliers when they invoice through the framework agreements.²⁶ Service charges enable CPBs to make profits to be reinvested to improve the quality of their services. Furthermore, national rules can define whether they can operate only in specific sectors, or act as wholesalers in predetermined product categories,²⁷ or arrange framework agreements instead of pursuing the earlier wholesale trade function (OECD, 2011).

Collaborative procurement has the potential to foster competition by crushing cartels and preventing abuse of dominant market positions (Arrowsmith, 2009; Chard et al., 2008).²⁸ A professional complex organization can better resist the interests of powerful groups that put pressure on procuring entities and even governments to act in their narrow interest. Absence of transparency contributes to the risk that procuring entities will succumb to corruption, vote buying, or protectionist pressure (McCrudden, 2007, p. 118, Garcia, 2009) and should be avoided. The high professionalism of such organizations, linked with transparency connected with the use of electronic tools and electronic archives that allow comparison of prices, performance, quality, and customer satisfaction can counteract these pressures. This policy can be carried out effectively by PBOs, considering the high amount of the value of the contract that can involve a considerable number of undertakings.

Consequently, the limit to free competition considered to be a risk involved in the aggregation of purchases can be safeguarded (Racca, 2010d). This requires in-depth knowledge of the specific market and needs appropriate organizational design and a strategic hierarchy for local, regional, and national procurement. When the requirements are broadly similar CPBs have to face highly concentrated supply markets amongst multi-national suppliers (Williams, Chambers, Hills, and Dowson, 2008). The aim of promoting competition, transparency and

enhanced value for money is consistent and reinforced by the objectives of World Trade Organization Agreement on Government Procurement, which shows growing recognition of the contribution of efficient and competitive procurement regimes to development (Anderson, 2007; Marchetti, 2009).

Collaborative procurement, and particularly CPBs at a national level, can improve purchasing power and drive the relevant market to achieve economies of scale and a long-term value for money or other horizontal policies, such as rising social and environmental standards. At a regional level a procurement policy can be more flexible and meet local needs and circumstances. A deliberate strategy to improve collaborative procurement can also be pursued with sub-regional consortia. Local procurement teams, freed up from the bigger and repetitive procurement procedures, can thus focus on developing local markets and participate in strategic contracts such as PPPs, in order to improve local and sustainable procurement opportunities (Williams et al., 2008). They can also play an important role in checking that national and regional procurement organizations are delivering quality and benefits on their behalf.

Facilitating collaborative purchasing through EU policies

The aggregation of purchasing is regarded as a fundamental step in optimizing professional skills, since it allows member States to address the present fragmentation and dispersion of these skills (OECD, 2011). The increasing complexity of the award procedure can be faced only with a number of different legal, economic and technical skills that a small or medium-sized procuring entity cannot afford. This should lower the increasing legal risk of dealing with protests and complaints during both the award of framework agreements and the procedure for call-offs and mini-competition. The recent Remedies Directive 2007/66/EC increases the instruments available for the tenderers to assure the full compliance to EU rules of the procuring entities.

Collaborative procurement can improve significantly the use of IT tools (Yukins 2009). A CPB can use these instruments for the digitalization of procuring documents and particularly to implement new procedures of selecting bidders such as e-auctions and framework agreements and build archives of awarding data. To date the fragmentation of procuring entities has limited their use due to the fact that they are more suitable and affordable for professional buying organizations' complex structures. Nowadays only 5 percent of public procurements in Europe are carried out by means of electronic procedures (e-procurement), whereas a 2005 European forecast²⁹ predicted that all procurements should have been carried out through e-procurement instruments by 2010. This aim was the logical outcome to the policy of the EU³⁰ as the Directive 2004/18/EC, implemented some new purchasing techniques like framework agreements and electronic auctions to 'increase competition and streamline public purchasing, particularly in terms of the savings in time and money which their use will allow'.³¹ Nevertheless, these purchasing techniques require procedure

standardization amongst Member States and improvement of adequate professional skills and IT tools, not only in the award procedure, but also in the performance phase. In this regard, a key issue to be solved is the divergent level of technical sophistication and regulation harmonization. (Arrowsmith, 2009; Guijarro, 2009; Graux and Dumortier, 2007). The Governments' implementation of IT and suitable electronic communication tools represents an expensive investment that will be balanced by economic savings linked to the dematerialization of procedures, especially if such investments are carried out through CPBs (Piga and Thai, 2007, p. 63 et seq.; Knight et al., 2007).³² The interoperability of the different purchasing processes is necessary to maximize the economic and quality benefits resulting from the use of framework agreements,³³ electronic auctions and perhaps also dynamic purchasing systems in the future.

European research has classified the EU27+ into four main groups,³⁴ but each country has its own specificities in the use of a National platform. In the first group of countries, the e-procurement policy is centralized and the use of the National platform is mandatory either for all contracting authorities³⁵ or solely for national contracting authorities.³⁶ Such a centrally steered approach encourages centralization and coordination but does not exclude per se the development of independent regional, local platforms, or private platforms.³⁷ The implementation of IT to transcend legacy and parochial systems within an industry, such as Exchange in the health sector (already widely employed in the US and Canada) are just emerging in Europe. Nonetheless, the key issue of assessing the number and value of procurements awarded through these platforms is not underlined in this European research. Italy, for example, is included in the first group in which the National Platform is mandatory for national contracting authorities. Nonetheless, only around 8 percent of the value of supplies of goods and services are awarded by the national CPB (Consip s.p.a.). Consip s.p.a. is the Italian public procurement agency awarding national frame contracts (NFCs) – basically, framework agreements with one economic operator and all conditions laid down at the outset – and managing the Electronic Marketplace (MEPA) on behalf of the Ministry of Economy and Finance (MEF). The mandatory recourse to CPBs is thus overcome.³⁸

Recent research³⁹ identified 17 Member States with CPBs which support e-procurement; and 10 that do not (Bulgaria, Cyprus, the Czech Republic, Estonia, Greece, Luxembourg, The Netherlands, Poland, Slovenia, and Sweden). Of the 10 Member States who have not established a CPB conducting e-procurements, four do not have a site supporting e-submission (Bulgaria, Greece, Luxembourg, and the Netherlands). Of the other six, three follow a largely decentralized model (Estonia, Sweden, and Poland), while the other three (Cyprus, the Czech Republic, and Slovenia) have central portals which can be used by a number of contracting authorities. This research underlines that in countries with decentralized approaches such as Germany, Italy, Sweden, and the UK, local or regional contracting authorities have a much larger range of procurement solutions available to them, including implementation through solutions developed

by private-sector service providers. Moreover, the number of sites in a specific country is not necessarily a strong indicator of its e-procurement capabilities.

Development of IT tools is important for the safeguard of transparency, non-discrimination criteria and a free competition principle (required by International and European legislation⁴⁰) in trans-border public e-procurement (Van Eylen, Oor, Schmitz, 2002). Member States face two considerable problems in their purchasing activity to reach the objectives of the Manchester ministerial declaration of November 24, 2005.⁴¹ The first problem is the widespread inability of both public authorities and undertakings to manage the entire purchasing process electronically. Second, the lack of common standards for electronic data exchange between member states is a constraint. This has led to a European project pursuing interoperability between different systems of e-procurement: Peppol (Pan-European Public e-procurement On-Line project of Borderless e-procurement).⁴² The aim of this project is to create a pan-European pilot solution to facilitate EU-wide interoperable public e-procurement for SMEs and to improve the opening of the market of goods and services, as the lack of common standards for electronic data exchange is considered at present an obstacle to cross-border participation.⁴³

The investment and human resources needed to participate in electronic tendering is a structural barrier for the full development of the electronic procurement market, especially among SME's. The lack of cross-border interoperability of electronic signatures creates obstacles to the free movement in the Internal Market and can prevent confidence in electronic transactions. Peppol serves the purpose of implementing the European Commission's policy to improve e-procurement standards, with a view to facilitating e-communication between all private companies in the EU (in particular SMEs) with all EU governmental institutions for all procurement processes. More specifically, its aim is to improve the interoperability of common e-procurement infrastructure (Kallas, 2008). The project is subdivided into eight work packages including five building blocks that cover the entire procurement process from e-tendering to e-payment (e-signature, Virtual Company Dossier, e-catalogue, e-dossier, e-ordering, e-invoicing, solutions architecture, design and validation) temporally divided into three phases (design, development, pilot project). The involvement of CPBs is meant to amplify the impact of the project Europe-wide. The interest of Peppol lies in the emphasis on the entire purchase process that normally, in the European perspective, ends with the award of the procurement, while a true and fair competition can grow only if undertakings know the rules of execution and of payments of any country.

The European experience in the European healthcare sector

Increasing budgetary restrictions may seriously undermine the quality of the health service provided in many European countries, thus calling for a prompt solution that could be found in public procurement policies. Rationalization, reduction of expenditure for goods and services, and strategic procurement are

considered common targets in the European public healthcare sector. Favoring professional buying and collaborative procurement can help reduce costs and allow further control over the performance of the contracts. Although we have already emphasized the potential benefits stemming from various forms of purchasing aggregation, in the healthcare sector, the urgency of achieving costs reduction and maintenance or improvement of quality is non-deferrable.

New and different legal tools for purchasing associations are now coming into use (Della Cananea, 2007, p. 381 et seq.; Dimitri et al., 2006, p. 47 et seq.; Bovis, 2008, pp. 94, 315 et seq.; Chard et al., 2008; Arrowsmith, 2009, p. 204 et seq.; Knight et al., 2007, p. 176 et seq.)⁴⁴ with the coordination of purchasing procedures of public providers of homogeneous healthcare services, or with the creation of a network of public bodies created at lower territorial levels. Some countries, such as the UK and France, seem to be very advanced in this regard. These countries have already experimented with various forms of procuring arrangements, using framework agreement for many years (Arrowsmith, 1999, pp. 115–146 and 168–186), and have created Central Purchasing Bodies (CPBs) specifically dedicated to the purchase of healthcare products.⁴⁵

Purchasing aggregation requires detailed planning on the basis of data collected on purchasing needs expressed by physicians and each public authority. A precise assessment of the level of complexity related to the different types of goods and services is required. Efforts to standardize non-homogeneous initial situations among healthcare agencies should be made to avoid the risk of having a mere sum of several contract documents laid down by different healthcare agencies. With this aim in mind, a unique national (or better still, European) classification and filing of healthcare products seems essential as far as it will allow definition of technical specifications related to different products that are actually equivalent, and will facilitate effective and fair work by the price observatories (Bovis, 2008, p. 136 et seq).⁴⁶

The aggregation of public demand in the healthcare sector implies coordination among different structures which refer to the users of those goods (i.e. physicians) and may prove to be particularly complex with regard to certain products and services (Schneller and Montgomery, 2007). As a minimum it seems justifiable, however, to pursue firmly the aim of aggregating the supply of common medical devices and pharmaceuticals that can reach a high percentage of goods and services expenditure (around 40 percent).

It seems equally important to assess needs in order to comply with EC competition rules, by identifying the ‘relevant market’ and the ‘dominant position’ on the demand side. Healthcare agencies often aim to protect and safeguard local SMEs’ survival by means of ensuring participation of the latter in award procedures. Trans-border participation in the healthcare sector seems particularly low as national distribution chains are set around Europe. The UK and French experiences in CPBs specifically with regards to health products are highly interesting in this respect. They have already standardized and aggregated purchases of several products carried out directly or on account of hospitals.

Indeed, geographic regroupings can federate hospitals that operate in the same territory, as well as regroupings set by the nature of the organization (because of the homogeneous characteristics they present). Academic medical centres and ambulance trusts are good examples of the latter. This does not exclude forms of centralization based on the creation of networks in which each organization can specialize in order to purchase certain categories of specific goods and services, even on behalf of others (e.g. one for drugs, the others for consumable medical devices).

The main difficulties found in early European experiences of centralized purchasing lay in the need for far-reaching reorganization of existing structures. For instance, there was a widespread perception that too long a time was necessary for defining quality requirements and clinicians' needs regarding the terms of delivery and post-purchase assistance. The difficulties of this experimental phase, however, can be solved by means of a proper reorganization of collaborative procurement aimed at achieving the necessary synergies, thus yielding economies of scale and of scope. The potential savings generated by these efforts should be reallocated to monitor better economic operators' performance.

The UK healthcare system has been relatively advanced in purchasing aggregation, taking advantage of different models of coordination under the guidelines of the then Office of Government Commerce.⁴⁷ The government agency Buying Solutions (now the Government Procurement Service) offered goods and services to healthcare agencies (NHS trusts and primary care trusts). As mentioned earlier, NHS Supply Chain is a public-private partnership created to purchase a very large number of medical and non medical products for the NHS; trusts are free to adhere or not to these framework agreements. While there are high levels of utilization in some hospitals for commodity items, the use of such contracts around physician preference items continues to take place at the individual hospital level. The procurement policies and demand aggregation can also be pursued by regional groupings for purchasing such as Collaborative Procurement Hubs. These have been particularly active in buying more complex equipments or services. Forms of national purchasing arrangements are provided by entities such as NHS Medicines Commercial Unit for pharmaceuticals.

The UK system is characterized by a quite strong competition between all these models of aggregation that leaves each hospital to make more strategically desired choices. Manufacturers and distributors must know and define their strategies to face up to these different models. Central purchasing bodies, in particular NHS Supply Chain as a dominant player in healthcare procurement, can play an effective deterrent role against anti-competitive practices by the providers by avoiding cartels and act as a deterrent to higher prices (Munro, 2006; Skilbeck, 2003a, 2003b). Framework agreements can be designed to favor the participation of more suppliers. There can also be problems where suppliers with CPB-negotiated framework agreements offer individual trusts or collaborative procurement hubs a better price as some form of incentive for more business; the term 'maverick buying' is used to refer to purchasing organizations buying

at below framework price, but we could view this also as ‘maverick selling’. Framework agreements which are threatened often include clauses that prohibit bidders from offering reduced prices, sanctioning them to apply this lower price to the framework (Arrowsmith, 2005b).⁴⁸

There has been a significant European dispute recently⁴⁹ concerning the conclusion of a framework agreement for the supply of haemostats by a UK CPB (NHS Business Services Authority) through a restricted tendering procedure. One of the unsuccessful tenderers filed a claim of a violation of the equal treatment and non-discrimination principle, disputing the application of the standstill period and the deadline to file claims (Racca, 2011). The UK provision for prompt claims left a discretionary power to the judge on the interpretation of the prompt claim, thus limiting the possibilities of bringing proceedings by aggrieved undertakings. The European Court of Justice further clarifies that the term cannot start from the notice of non-awarding of the contract and the deadline must be defined and adequate. This is an example of how the inadequacy of remedies does not prevent significant violations of the principles of equal treatment and non-discrimination. Surprisingly, the reasons for the refusal to award the framework agreement were based on a score of zero for price and other cost-effectiveness factors, because the tenderer had submitted its list prices while all the other tenderers had offered discounts on their list prices. Second, with regard to the delivery performance and capability criterion, all tenderers that were new to the relevant market in the UK received a score of zero for the sub-criterion relating to customer base in the UK. Central purchasing bodies should develop good practices and comply fully with the European directives, providing the communication of a ‘correct award decision’ to each tenderer, accompanied by a summary of the relevant information in order to assure transparency and encourage trans-border participation.

Other very interesting forms of cooperation can be found in the National Institute for Health and Clinical Excellence which provides a system of evaluation of products to enable standardization and sharing of technical specifications. The UK Department of Health offers consulting services, market analysis and supply management, through the NHS Shared Business Services (which is a public–private partnership with Steria) and created a national database on the requirements for qualification of suppliers of goods and services health (SID4Health). It offers services and IT for the development of guidance documents and templates for the preparation of tender documents. The effectiveness of such information, in actually driving standardization and contract compliance remains, however, unanalyzed.

In France, different forms of cooperation in the healthcare ‘fonction achat’ (Cormier, 2006; Mourier, 2010) are implemented. One first model, led to the creation of UNI. HA, a GCS (groupement de Cooperation sanitaire) which brought together all the university hospitals and the larger medical centers in France (54 structures). This group is buying 45 percent of the hospital expenditure in France, for an annual value of nearly 7 billion. Purchase aggregation is

based on the establishment of sector coordinators who define shared specifications based on the needs identified and purchase specific goods or services for all the members.⁵⁰ Another model is the Consortium Achats des Centres de Lutte contre le Cancer, aggregating purchases of 20 cancer centers.⁵¹

On the one hand, the aggregation of purchases (mutualization) is carried out at the regional level, with the provision of the Resah-Ile de France, set up as a groupement d'intérêt public in 2008 with the role of coordinating the aggregation of purchases by 'établissements du secteur sanitaire et médico-social francilien' (French institutions of the health sector and medical social) that, to date, has 120 members in the Ile de France (excluding Paris)⁵² and makes purchases over 1 billion per year.⁵³ They use the Groupements de commande (Guillou, 2002, p. 38 et seq.; Taillefait, 2001) for aggregating demand achieving significant savings (Legouge, 2010a, 2010b; Béenazé, 2010; Aleksandrowicz, and Béenazé, 2010). The Resah defines framework agreements with several operators (Pongérard-Payet and Bangui, 2007; De Géry and Schmidt, 2007, 117 et seq.), representing up to 80 percent of the economic operators interested, and leaves a second step of competition between those with framework agreements and the hospital's buyers (De Géry and Schmidt, 2007; Hehn et al., 2010).

The Spanish and German public procurement systems in the healthcare sector are both characterized by the voluntary choice of joining the possible forms of association and joint procurement (e.g. in the Autonomous Community of Catalonia; Rey del Castillom, 2000; Pérez Gálvez, 2003; Moreno Fuentes, FJ et al., 2007; Amatucci, et al., 2010). The German experience is characterized by the Gesetzliche Krankenkassen (statutory health insurance) (Grunow and Nüscheler, 2010; Stegmüller, 2009) which is classified by the Court of Justice as 'contracting authorities'⁵⁴ (Burgi, 2008; Goodwin et al., 2009). Even in the German healthcare sector, some forms of voluntary aggregation of purchases are implemented, without a territorial organization (Kruetten et al., 2005; Essig, 2000).

Italian experiences for group purchasing originated in some cases at the lower levels of Health Agencies, through the establishment of purchasing associations or of other forms of collaboration (Racca, 2010b). In these cases, one of the parties involved is entrusted with proxy to manage the entire supply or the services' purchasing procedure or only, a single part of it. Such experiences evolved towards the establishment of purchasing associations and later allowed the creation of public bodies, in some cases four or five per region, with legal status at sub-regional levels.⁵⁵ Along with the management of supply and services purchasing, these public bodies are also entrusted with other functions such as facilities, logistics, stock and IT management, organization and management of recruitment procedures, and management of human resources training and wages. Preference is thus given to inter-authority bodies (or networks), an organizational model which proves to be suitable for supporting Healthcare Agencies' administrative and technical activities (Meneguzzo et al., 2010). This avoids centralization of the task of such functions within a sole office established at a

regional level. On the other hand, the Italian law facilitated the formation of a network between the National Central Purchasing Body – Consip S.p.A. – and regional CPBs that have more recently started aggregating demand at a local level (Racca, 2010e; Massera and Simoncini, 2011).

Regional CPBs often have a specific mandate to operate in the healthcare sector and define mandatory framework agreements for medical devices. However, associations of economic operators often voice their opposition against various forms of centralized public procurement.⁵⁶ The main concern is that aggregation of demand does hurt suppliers' participation in the procurement market, especially SMEs, thus leading to a reduced participation of smaller businesses in public procurement contracts. Centralized purchasing would also reduce the incentive to produce innovative solutions and lead to a decrease of the quality of supplied goods and related post-sale services. The criticism that centralized procurement will lead to the award of a few very big contracts is, however, somewhat unfounded. Other examples of Italian case law refer to the 'congruence assessment' (valutazione di congruità, prescribed by Italian law⁵⁷) in order to avoid conditions worse than the ones set in the framework agreement (when the adherence to the framework agreement is not mandatory). For example, a private supplier challenged an Italian health agency's evaluation of 'incongruence' of its offer in a single award procedure, in comparison with the ones set in the framework agreement, and the court agreed with the procuring entity assessment (Racca, 2010a).⁵⁸

It is evident that the goal of achieving an internal market in Europe is far from being reached given the higher level of fragmentation of public demand as compared to that of the supply side, which seems to be more structured. For example, for certain product categories in the healthcare market, there exist only a few suppliers worldwide that tend to organize themselves by creating structured supply chains in order to meet public demand. Moreover, in a few years the IT archives of these complex procedures will be complete. It will radically change the possibilities of comparing services and prices obtained, as well as the possibility of setting benchmarks. To date, for example, in Italy, the costs of medical devices are extremely different depending on the hospital, even in the same area. The Ministry of Health therefore has encouraged centralization of purchases by means of a government bill aimed at creating a database of medical devices, in order to control consumption of products and related expenditure.

IT tools are becoming increasingly important in ensuring transparency and controls on the quality of goods and services⁵⁹ during and beyond the award procedure. Their scope in the future will include quality control of healthcare provided by physicians relative to quality and quantity of devices and treatments provided (Racca, 2011). In this context, the role of central purchasing bodies could really become strategic since the exchange of information – supported by electronic tools – facilitate coordination to develop common contract terms which may, in turn, lead to a truly internal market in which the best hospital purchasing practices could be identified and innovative solutions could be developed (Mourier, 2010). The development of standard contract models (with reference to

different categories of purchase), and uniform contract terms including reference to the execution phase of contracts and payments can promote the participation of a higher number of companies.

It is not possible to have true competition if the payment terms for health providers can reach almost 800 days, as happens most notably in Italy. This situation surely discourages participation in public procurement. Effective purchasing requires experimentation and fruitful cooperation with a view to comparing contractual conditions, achieving coordination of procedures, defining models of typical contracts, and perhaps, initiating joint award procedures (Racca, 2008). This cooperation could achieve the definition of new rules to define models of uniform contracts, defining all aspects, from award procedures to the execution of the contract. This perspective could contribute to the development of an effective competition among European suppliers to improve the quality of healthcare performances.

CONTRACT MODELS FOR THE AGGREGATION OF PUBLIC DEMAND

Flexible contractual tools: Framework agreements

The EU Directive 18/2004/CE ‘On the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts’ provided public authorities with two major tools for aggregating public demand and streamlining procurement processes, namely Framework Agreements (FAs) and the Dynamic Purchasing System (DPS), the latter being sometimes thought of as an entirely electronic and ‘open’ version of an FA.

Framework agreements can be considered arrangements for the anticipated delivery of goods and services over a certain period of time. More precisely, art. 32 of EU Directive 18/2004/CE defines framework agreements as ‘agreements between one/more contracting agencies and economic operator(s) ... to establish the terms governing contracts to be awarded during a given period ... with regard to price and ... the quantities envisaged.’ The evolution of regulation on public procurement in the last few years – together with a series of interpretations⁶⁰ of the same regulation issued by the European Commission itself – has led procurement officers and scholars alike to classify FAs according to two main dimensions: (1) the degree of completeness of the agreement contract (‘master contract’); and (2) the number of economic operators with whom a FA is concluded. This leads to four classes of FAs as described in Table 8.1 below.

Despite the formal classification into four different ‘families’, most public procurement practitioners thought about FAs by implicitly referring to the ‘incomplete’ FAs concluded with more than one economic operator.

The benchmark case: The National Framework Contracts

It is worth starting our analysis with the case of a FA concluded with one economic operator and all conditions established in the master contract. In Italy, the National Public Procurement Agency (CONSIP S.p.A.) has been mostly relying

Table 8.1 Types of framework agreements

	<i>Characteristics</i>	<i>Completeness of conditions</i>
Number Of operators	<ul style="list-style-type: none"> • Complete (all conditions established in the master contract) • One economic operator • Complete (all conditions established in the master contract) • More than one economic operator (at least three) 	<ul style="list-style-type: none"> • Incomplete (not all conditions established in the master contract) • One economic operator • Incomplete (not all conditions established in the master contract) • More than one economic operator (at least three)

on this kind of FA – also known as National Framework Contracts (NFCs) – since it started implementing the program of rationalization of public spending on goods and services on behalf of the Italian Ministry of Economy and Finance (Varley, 2008).

The main feature of a NFC is that quality–price competition is entirely concentrated in the first stage, whereas the second stage, at which the specific contracts are awarded, is simply reduced to issuing of purchase orders. Hence, one is led to believe that there might exist at least two main reasons for considering the use of NFC. First, bundling separate procurement strategies into a single process – carried out by a CPB/agency – shields smaller public authorities from having to repeat the same tasks several times and allows specialized personnel to check the tender documents more carefully, thus considerably reducing the risk of litigation at any stage of the procurement cycle. There exists, however, an additional benefit that normally goes unnoticed, namely the ‘standardization of the procurement language’, since different purchasing needs will be satisfied by relying on the same procedure. Standardization helps reduce barriers to entry into the procurement market, as firms will save on resources employed to check the differences in procurement strategies adopted by distinct contracting authorities, even if the latter end up purchasing similar commodities. Second, if several purchase orders (for commodities) are incorporated into the same contract, contractors are likely to operate at much lower unit costs than the level that would be attainable when the overall value is split in many separate contracts. If the economies of scale and/or the higher bargaining power of the CPB/agency more than compensates for the potentially lower number of competing firms – due to more stringent economic/financial participation requirements – an NFC may trigger tougher competition and generate sizeable savings.

In the healthcare sector, the use of NFCs is likely to become the most effective procurement tool when (1) technological standards have to be rather homogeneous across different public authorities; (2) the relevant market is populated mainly by big firms; (3) needs for customized solutions do not play a major role in the design of procurement strategies. One noticeable example is provided by CONSIP’s NFCs for ultrasound machines that generated in the 2003–2008 over 60% in unit savings. ‘Simple’ purchasing contracts concluded through distinct

and autonomous awarding procedures, while giving up such benefits, provide public authorities with maximum flexibility and the possibility of customization; they also reduce competitors' uncertainty about the intrinsic characteristics of the final demand pattern. Ideally, simple contracts also ensure allocative efficiency, in the sense that it is likely that each contract will be served by the most efficient supplier in satisfying the public authority's specific needs (i.e., an efficient matching between supplier and final user).

From this perspective, which ranks the different procurement strategies on the basis of the degree of standardization (or centralization), multi-award 'incomplete' FAs (also known as FAs strictu sensu) lay somewhere in between NFCs and simple contracts (see Figure 8.1). This suggests that their main purpose should be to address the trade-off between demand aggregation and process efficiency on the one hand and customization, flexibility and allocative efficiency on the other.⁶¹ In other words, the main goal of incomplete FAs is to streamline the process for repeated purchases by providing a large amount of the overall required effort in the first selection round, while leaving some space for customization and further competition at the second stage, when the actual procurement needs arise and their specific features (quantities, delivery conditions, specific tasks to be undertaken, customizations requested) become better known.

As mentioned above, such a mechanism typically turns out to be very useful in the case of a central purchasing body/agency concluding the agreement in order to define the basic qualitative features as well as providing an upper boundary for price conditions for contracts to be awarded by different and heterogeneous contracting authorities. This is the case, for instance, of the GSA (General Services Administration) schedules in the US (accessible by all US Federal Government

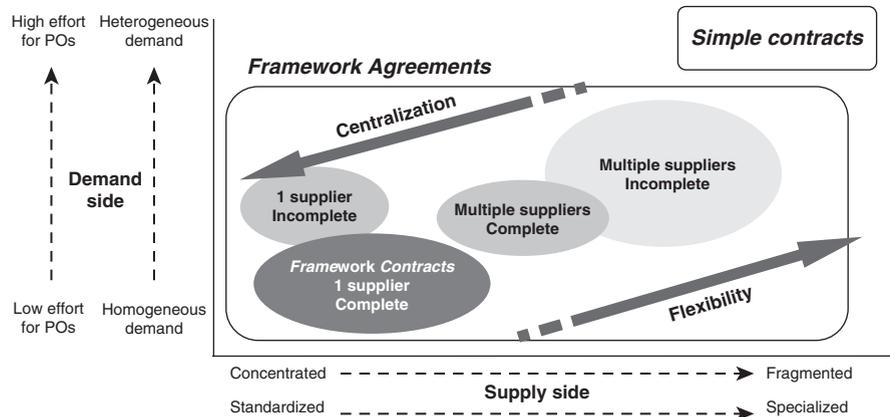


Figure 8.1. Flexible strategies for centralized and collaborative public procurement. POs: public organizations.

agencies), and the Framework Agreements concluded by the Office of Government Commerce (OGC) Buying Solutions in the UK, and Hansel in Finland. In what follows, however, we will focus our attention to the case where the FA is concluded and all the specific contracts are awarded by one single contracting authority.

***Multi-award incomplete framework agreements:
The two-stage competition***

Where the needs and/or the preferences of the contracting authority are somehow unknown or heterogeneous with respect to relevant aspects of the contracts to be awarded, it is then optimal to let these aspects be defined through a second round of selection (the call-off stage). When actual needs arise, and the uncertainty about the exact object and characteristics of a single specific contract is sensibly reduced, the selection is reopened and the contenders are asked to be precise and complete their first-stage offer. Thus, unlike what occurs with NFCs, the two-stage procurement process consists of two distinct rounds of competition. Since tenders /offers submitted at the first stage cannot be substantially modified at the second stage,⁶² then 'core' or 'basic' technical features of the supply/service should be evaluated when concluding the FA and should not be successively modified. Competition can instead be reopened with respect to optional items/services, customizations or further improved qualitative features.

From the point of view of the public entity designing and implementing the FA –as in the case of a CPB/agency – the main issue to address is how to balance the competition between the two stages. Spurring competition at the first stage, de facto pushes an FA to become more similar to an NFC. On the contrary, when competition for selecting the operator's part of the agreement is loose, the call-offs tend to become similar to independently-run competitive tenders. It is then worth briefly discussing the main aspects in the design of the whole process which affect the balance of competition between the two stages.

The first of such factors is the degree of completeness of the 'master contract', i.e. the relative proportion of clauses of specific contracts which are set at the first round of competition and cannot be modified at the call-off stage. The higher the number of clauses of specific contracts defined at the first stage, the lower the degree of competition at the second stage with respect to the first one. In principle, the authority concluding the FA should concentrate at the initial round of selection on the aspects of the supply/service likely to be common to all specific contracts. Most of the intrinsic quality dimensions should be established in the master contract, while leaving post-purchase service or delivery conditions to the second stage of competition. As a consequence, a more complete master contract will require more effort in concluding the framework agreement (e.g. in carefully estimating future needs and evaluating submitted tenders) while it will streamline the call-off processes. This will, however, limit the degree of flexibility in tailoring the purchasing contract to each public buyer's needs.

The second key aspect affecting the balance of competition is the number of economic operators. This number can be either exogenous (i.e. predetermined in the tender documents drafted by the contracting authority managing the first stage) or endogenous (i.e. the agreement can involve all the operators whose tenders reach a predetermined quality and/or price threshold). The first option can be considered more useful when tight first-stage competition is pursued by the contracting authority, or when limiting the number of operators party to the agreement is important to reduce effort in evaluating submitted tenders at the second stage.

THE RELEVANCE OF FRAMEWORK AGREEMENTS IN THE HEALTHCARE SECTOR PROCUREMENT: TWO EXAMPLES

Example 1: Procurement of incontinence products

In 2006 between 100 million and 260 million adults worldwide suffered with incontinence and related pelvic floor disorders, the majority being female and elderly. In Italy about 5 million, mostly women, suffered with incontinence. Although the Italian Public Healthcare System provides up to 120 incontinence products or adult diapers per person per month free of charge, approximately 2 million people prefer to buy their own products privately.

Since healthcare – and related spending decisions – is constitutionally entrusted to Regions in Italy, it is often difficult to get precise figures of national spending on incontinence products. However, figures produced by the Italian Ministry of Health, the Italian Association for Incontinence ('FINCO') and the Italian Association for Biomedical Technologies and Services ('Assobiomedica') estimated this as €260 million in 2009. Both the minimal quality standards that diapers must fulfill as well as the maximum number of pieces that each individual is entitled to receive free of charge from the (regional) healthcare system are determined by a Ministerial decree. This implies that procurement contracts for diapers might be considered 'standardized', at least with respect to intrinsic technical specifications.

Distribution channels play a major role in determining purchase price, so related contractual clauses may generate the need for some 'tailoring' of procurement contracts. In Italy, healthcare centers (e.g. hospitals) provide diapers to people with incontinence-related disorders by relying on four distribution channels:

1. home delivery,
2. hospital delivery (if the patient is hospitalized)
3. delivery to local healthcare institutions/centers and distribution to patients by internal structures (e.g. a hospital's pharmacy),
4. delivery to local pharmacies (through a previously established agreement between the producing firm and local health centers).

Centralized procurement strategies in Italy used to hinge on NFCs awarded by Consip at a national level until 2006 (when the provision on Framework Agreement in Directive 18/2004/CE was transposed in the Italian Code for Public Contracts) and by other CPBs operating a regional level. However, as already pointed out, suppliers were asked to submit tenders without knowing in advance where actual needs would arise (i.e. the exact location of a hospital making a purchasing order) thus bearing considerable uncertainty concerning distribution costs. Suppliers tend to react to such an uncertainty by raising bids to cover costs when distribution costs turn out to be higher than expected. This obviously dwarfs, at least to some extent, the potential benefits of demand aggregation.

Potential inefficiencies generated by demand-driven uncertainty - often one of the most discussed issues during debriefings with suppliers prior to any publication of call for tenders - may be overcome by a 'simple' FA whereby (1) the national procurement agency conclude the agreement with a few suppliers by evaluating essential technical characteristics (say, those prescribed by health regulation) and the price of any single diaper (possibly by splitting the FA into different product lots); and (2) healthcare institutions/centers reopen competition by soliciting bids for different distribution channels and, possibly, evaluating additional quality characteristics. Such a procurement strategy would in principle maximize the benefits from process streamlining and economies of scale (first stage), while leaving room for demand tailoring (second stage). Ideally, at least in Italy, one could also imagine the second round of competition to be carried out by a regional central purchasing body, thus substantiating the possibly abstract concept of a 'network system' introduced by the Italian legislator in 2007 budget law.

Example 2: Setting a dynamic purchasing system for drugs

In 2009, the Italian Agency for Drugs⁶³ estimated that public expenditure on drugs - administered through the national healthcare system - was approximately €18 billion. Although the Italian public expenditure in per capita terms is lower than the average in Europe, consumers' associations estimate that 30 percent of drugs are wasted due to date expiration or over-prescription. Effective procurement of drugs - particularly those which are free from patent protection (i.e. generic drugs) - is considered critical to controlling healthcare expenditure.

In providing worldwide guidelines for the procurement of drugs, the World Health Organization⁶⁴ emphasizes four main activities to be carried out by agencies in charge of procurement of drugs: (1) prequalification of pharmaceutical products and manufacturers; (2) purchase; (3) storage; and (4) distribution. Although it would seem plausible to have a single procurement agency undertaking all four activities when demand aggregation takes place at a local level, the same organizational model becomes less viable when procurement is carried out, say, at a national level. In the latter case, centralization may be achieved for prequalification and purchase, while storage and distribution is delegated to each single public entity (e.g. a hospital).

Usually, competitive tendering processes for drugs involve thousands of ‘product lots’ whereby each lot is represented by (1) the name of the active pharmaceutical ingredient; (2) strength per dose and dosage form; and (3) pack size. These three features give rise to a fairly ‘standardized’ product providing certification systems are in place to verify reliability of information provided by manufacturers.

A potentially effective centralized procurement model for drugs might be a two-layer organization solution whereby a central procurement agency – at either regional or national level - would draw up a list of qualified manufacturers (and drugs) and provide a suitable framework to purchasing agencies for conducting competitive tendering procedures.

The Dynamic Purchasing System (DPS) – as defined by art. 1 of the EU Directive 18/2004/CE – seems to deliver an appropriate purchasing tool. A DPS is ‘a completely electronic process for making commonly used purchases, the characteristics of which, as generally available on the market, meet the requirements of the contracting authority, which is limited in duration and open throughout its validity to any economic operator which satisfies the selection criteria and has submitted an indicative tender that complies with the specification.’ Relying on a completely electronic system seems appropriate for a product whose intrinsic characteristics are objectively specified. Moreover a DPS would streamline the acquisition process since all phases take place on the same platform, while favoring the emergence of a competitive market since the system remains open to new comers throughout its duration.

CONCLUSION

Guaranteeing high-quality healthcare in European countries will require increasingly larger shares of national budgets in years to come. Procurement may be the most effective policy tool to liberate resources. Although purchasing costs could be more tightly controlled by increasing the degree of competition in procurement markets, European rules for the award procedure in Member States⁶⁵ have not yet generated significant participation in non-domestic procurement procedures.

We have maintained that collaborative procurement may play a strategic role in the healthcare sector for at least two reasons. First, by aggregating demand it enhances public buyers’ purchasing power and makes quality standards more uniform, thus raising overall value for money of healthcare products (e.g. drugs, equipments, medical devices). Second, public bodies may enjoy the benefits arising from cost and time reduction relative to ‘independent’ award procedures. Hence, additional human effort can be shifted from the award phase to contract management, reducing the risk of possible contractual infringements by contractors (Racca et al., 2011).

Besides its role of value-for-money enhancer, collaborative procurement may foster innovation and sustainability by promoting competition between economic

operators. Well-designed procurement processes can influence firms' choices, raising social and environmental standards, achieving better and more sustainable quality of life for citizens (Racca, 2010, a; McCrudden, 2007, p. 114 et seq.; Caranta and Richetto, 2009).⁶⁶

We have also emphasized that collaborative procurement does modify the role played by each single contracting authority as 'aggregated' award procedures greatly differ from those managed by a single purchasing unit. Large purchasing procedures require joint contribution of different professional skills (e.g. technical, legal and economic) seldom available to small public entities. CPBs are positioned to conduct extensive market analyses that single purchasers cannot carry out on their own. A thorough knowledge of the relevant market structure enables the design of the most appropriate procurement procedures enabling common standards, performance monitoring, lot specification and timing of new award launch (Racca 2010 b, and c).

Demand heterogeneity, often driven by physicians' preferences for supplier-dependent products (Montgomery and Schneller, 2007), is often considered the major justification for decentralized procurement in the healthcare sector. Nevertheless, demand aggregation can still be achieved by relying on innovative contractual solutions such as framework agreements that allow for contract-tailoring (possibly driven by physicians' technical requests) while guaranteeing a minimal level of contract standardization.

It would be misleading, though, to look for precise guidelines on some form of 'optimal' level of collaborative procurement in the healthcare sector. The most appropriate level of aggregation would depend, in general, on the nature of goods and services as well as on the prevailing characteristics of the supply market. Therefore the 'right' level might be at a local, regional, national or even European level.

NOTES

1. Commission EU, 'Public procurement indicators 2010', November 4, 2011, in http://ec.europa.eu/internal_market/publicprocurement/docs/indicators2009_en.pdf.

2. Commission EU (2011). The Green Paper reflects issues that the Commission has identified as possible aspects for future reform of EU public procurement rules. The topics concern: the simplification of procedures; the better access to contract opportunities for all economic operators; the potential of public procurement to support green and social policy; the cross-border participation and the tools against corruption.

3. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: Towards a Single Market Act – For a highly competitive social market economy of 27 October 2010 - COM(2010) 608.

4. Organisation for Economic Co-operation and Development, *Health Data 2010: Statistics and Indicators*, 2010, in http://www.oecd.org/document/30/0,3746,en_2649_37407_12968734_1_1_37407,00.html.

5. European Parliament and of the Council, Directive 18/2004 of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts [2004] O.J. L134/114.

6. European Parliament and of the Council, Directive 17/2004 of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors [2004] O.J. L123/1.

7. European Parliament and of the Council, Directive 2007/66/EC of 11 December 2007 amending Council Directives 89/665/EEC and 92/13/EEC with regard to improving the effectiveness of review procedures concerning the award of public contracts.

8. The most relevant in terms of public procurement are the prohibition against discrimination on grounds of nationality; the free movement of goods; the freedom of establishment; and the freedom to provide services. In addition to these fundamental principles in the Treaty, some general principles of law have emerged from the case law of the European Court of Justice, which are applied in the context of public procurement. The most important of these general principles of law in the current context are equality of treatment, legal certainty, transparency, mutual recognition and proportionality.

9. For a comparative analysis of public expenditure see: Commission EU, 'A report on the functioning of public procurement markets in the EU: benefits from the application of EU directives and challenges for the future', February 3, 2004; Commission EU, 'Commission staff working paper – implementation report SEC(2003)33, January 14, 2003.

10. The contracting authorities and entities concluding contracts outside of the scope of the Public Procurement Directives must comply with the fundamental principles of the EU Treaty in general and the principle of non-discrimination on grounds of nationality in particular, where those contracts are of certain cross-border interest. C. giust. Ce, sez. VI, December 7, 2000, in C-324/98, *Telaustria Verlags GmbH v Telekom Austria AG*; C. giust. Ce, sez. IV, May 15, 2008, in C-147/06 and C-148/06, *SECAP SpA v Comune di Torino*, for procurement below the threshold with a certain cross-border interest. C. giust. CE, February 21, 2008, in C-412/04, *European Commission v Repubblica italiana*.

11. Organisation for Economic Co-operation and Development, *Public Procurement in EU Member States – The Regulation of Contract Below the EU Thresholds and in Areas not Covered by the Detailed Rules of the EU Directives*, May 27, 2010, 13 et seq, in http://www.oecd-ilibrary.org/governance/public-procurement-in-eu-member-states_5km91p7s1mxv-en, where on explain that "an evaluation of the Public Procurement Directives carried out by Europe Economics for the European Commission and published in 2006 concluded that only about 20% of the total amount of public procurement was covered by the detailed rules of the Directives, while the remainder would be covered by exceptions to the Directives, such as certain defence procurements and below-threshold procurement".

12. Organisation for Economic Co-operation and Development, *Centralised Purchasing Systems in the EU*, January 11, 2011, in http://www.oecd-ilibrary.org/governance/centralised-purchasing-systems-in-the-european-union_5kgkqgv703_xw-en. This document provides a comparative analysis of some centralised purchasing bodies in Denmark, Finland, France, Hungary and Italy in addition to some brief information about Sweden and UK, in terms of organisation, coverage, objectives and rationale, financing models, types and use of framework agreements and call-off systems, as well as the electronic procurement systems used. This study explains also the success factors of the organizational models and provide a guidance for the future challenges. Commission EU, 'Green paper on the modernisation of EU public procurement policy – Towards a more efficient European Procurement Market', *cit*.

13. Commission EU, 'European code of best practices facilitating access by SMEs to public procurement contracts' SEC(2008) 2193, June 25, 2008.

14. OGC, *Framework Agreements: OGC Guidance on Framework Agreements in the new Procurement Regulations* (January 2006), Commission EU, Explanatory Note – Framework Agreements – Classic Directive, *cit*.

15. Organisation for Economic Co-operation and Development, *Centralised Purchasing Systems in the EU*, *cit*. About NHS see: NHS Supply Chain, *NHS Supply Chain saves trusts more than £200 million*, June 25, 2010, in <https://www.supplychain.nhs.uk/news/press-releases/2010/nhs-supply-chain-saves-trusts-200-million/>; Datactics, Case Study: NHS Supply Chain, in <http://www.datactics.com/Resources/case-studies/nhs-supply-chain>.

16. The Japanese government discussed the significance of an innovation orientated toward a new approach for public procurement. And through comparison with procurement strategies employed by the US, the UK and the Netherlands it proposes: (1) intermediary professional actors to

appraise prototype technologies; (2) interactive dialogues between suppliers and users before tendering; (3) fair and transparent competition focussing on new social and economic values of emerging technologies are the absolute essence of public procurement for innovation.

17. Commission EU, DG Enterprise and Industry, 'The lead market initiative' (2009).

18. The three trans-national network are: "Enprotex" with the Objective to spark innovation of protective textiles through public procurement to meet the future needs of fire and rescue services. In particular, the project will aim to provide industry with forward commitments for the procurement of protective textiles products so as to encourage innovation in the sector (about "Enprotex" see: <<http://www.firebuy.gov.uk/home.aspx>>. "Sci-Network" for help public authorities exploit and drive sustainable innovations in public construction and regeneration projects across Europe by bringing a large group of public authorities together with other key stakeholders in the construction sector with the aim to help combat the cross-border fragmentation of the sector. Specific working groups will focus on 3 topics: renovation of existing building stock, innovative building materials, and the use of life-cycle analysis (LCA) and life-cycle costing (LCC) (about "Sci-Network" see <<http://www.iclei.org/index.php?id=796>>. "Lcb-Healthcare" seeks to stimulate innovative low-carbon building solutions for the healthcare sector. A platform for a network of public procurement stakeholders that wish to be proactive in stimulating innovative low-carbon building solutions for the healthcare sector will be created. Demonstration pilots will be done in all consortium countries aiming at collating, testing and developing further the tools created and enabling the spread of best practices (about "Lcb-Healthcare" see <http://www.bis.gov.uk>).

19. The public procurement networks became operational in September 2009. This is the first time that the Commission funds specialised procurement networks dedicated to innovation. Each receives about €1 million in funding.

20. Commission EU, 'European code of best practices facilitating access by SMEs to public procurement contracts', SEC(2008) 2193, June 25, 2008.

21. Commission EU, 'Think Small First – A "Small Business Act" for Europe', COM(2008) 394 Final, June 25, 2008.

22. DG internal policies of the UE 'The Applicability of Internal Market rules for Inter-Communal Co-operations' September 2006.

23. Art. 1, para. 10 European Parliament and Council Directive 18/2004 [2004] O.J. L134/114 A "central purchasing body" is a contracting authority which: – acquires supplies and/or services intended for contracting authorities or – awards public contracts or concludes framework agreements for works, supplies or services intended for contracting authorities.

24. Whereas n. 23 European Parliament and of the Council Directive 17/2004 of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors [2004] O.J. L123/1.

25. The system has been characterised by co-ordinated purchasing, where individual authorities have been given the responsibility for awarding framework agreements for a particular product or service area, which can or should be used not only by the state administration but also by municipalities and regional authorities, on a voluntary basis. Organisation for Economic Co-operation and Development, *Centralised Purchasing Systems in the EU*, cit.

26. Organisation for Economic Co-operation and Development, *Centralised Purchasing Systems in the EU*, cit., 11, where it is noted that the service fee is based on the invoiced turnover generated under the framework agreement and normally amounts to between 0.6% and 2%.

27. See Organisation for Economic Co-operation and Development, *Centralised Purchasing Systems in the EU*, cit., particularly on Italy, Hungary, Finland and Denmark experiences the operations of Consip (Italy) and KSzF (Hungary) are regulated quite in detail, while the CPBs in the Nordic countries are given more freedom to plan and manage their operations. As an example, the regulatory instrument in Hungary governing the operations of KSzF prescribes in detail the product areas and public sector bodies covered and specifies whether the framework agreements are mandatory or voluntary as well as the financing mechanism. No similarly detailed regulations exist in countries such as Denmark, Finland and Sweden. There, CPBs may basically decide for themselves on the products and service areas that are subject to framework agreements, the financing models, the type of framework agreements to use including call-off systems and, in particular, the organisation, staffing, market relationships and design of all of the steps in the procurement process.

28. Commission EU, 'European code of best practices facilitating access by SMEs to public procurement contracts' SEC(2008) 2193, June 25, 2008.

29. The Manchester ministerial declaration of 24 November 2005 defines the following target: "By 2010 all public administrations across Europe will have the capability of carrying out 100% of their procurement electronically and at least 50% of public procurement above the EU public procurement threshold will be carried out electronically". The PEPPOL project is strongly supporting this target.

30. Commission EU, 'Public procurement – Commission sets out Action Plan to move public purchasing in Europe online' IP/05/66, January 19, 2005. See also: Commission EU 'Action plan for the implementation of the legal framework for electronic public procurement', December 13, 2004.

31. Whereas n. 12 European Parliament and Council Directive 18/2004 [2004] O.J. L134/114.

32. In Italy, CONSIP S.p.A. can also provide for ICT tools for *e-procurement* and can coordinate the choices of the regions to assure easy interoperability. Art. 1, para. 450 of Law n. 296 of December 27, 2006. The establishment of new regional CPBs cannot be separated from the use of technological platforms suitable to run electronic auctions and award procedures as contemplated by the EC directives. The improvement of ICT tools could also be assured by the development of e-marketplaces (MEPA) – managed in Italy by CONSIP S.p.A.

33. For an analysis of framework agreements see: Commission (Ec) 'Explanatory note – framework agreements -classic directive' CC/2005/03 14 July 2005.

34. Commission (Ec), 'Smarter, Faster, Better eGovernment, 8th Benchmark Measurement', November 2009.

35. Luxembourg, Lithuania, Malta, Slovenia, Switzerland.

36. Austria, France, Italy and Portugal.

37. For the other three group: "2) Mandatory National e-Procurement *Portal*: it is mandatory to publish tenders on a single National Portal (Estonia, Bulgaria, Cyprus, Czech Republic, Croatia, Finland and Romania). This obligation can be bound to certain criteria: European tenders, or tenders above a national threshold, or tenders within a specific sector such as ICT. Portals normally do not provide for e-Procurement services beyond publication. Notice that countries in this group may also have a national e-Procurement platform in place which can be used by authorities on a voluntary basis. 3) Non-Mandatory National e-Procurement *Platform/Portal*: there is a National e-Procurement infrastructure, whose use is recommended but not mandatory for contracting authorities (Ireland, Denmark, Germany, UK, Poland, Sweden, Norway, Hungary, Netherlands, Belgium, Latvia, Slovakia and Spain). There are some nuances within this group of countries. For example, Belgium and The Netherlands both strongly encourage the publication of notices on the central portal and provide a wide range of services. Ireland mandates the use of the national platform only for ICT products and services. In Spain the National e-Procurement Platform is mandatory for Central Government Contracting authorities. In the case of Germany and The UK, the e-Procurement infrastructure is strongly decentralized. In the Scandinavian countries, The Netherlands and The UK public service providers are in competition with private ones to provide e-Procurement services. For example, The UK's National e-Procurement Portal 'Buying solutions' offers consulting support and links to more than 600 service providers. 4) No National e-Procurement *Platform/Portal* (yet): This is the case for Greece and Iceland only": Commission EU, 'Smarter, Faster, Better eGovernment, 8th Benchmark Measurement', *cit.*. The document presents also an analysis of the development of the e-Procurement benchmark in EU Member States.

38. Commission EU, 'Smarter, Faster, Better eGovernment, 8th Benchmark Measurement', *cit.*. There is no doubt that these initiatives have created the conditions for a shift from traditional to electronic procurement in the entire EU.

39. Siemens, 'Study on the evaluation of the Action Plan for the implementation of the legal framework for electronic procurement – Analysis, assessment and recommendations', July 9, 2010, in http://ec.europa.eu/internal_market/consultations/docs/2010/e-procurement/siemens-study_en.pdf.

40. Commission EU, 'Modernising ICT Standardisation in the EU – The Way Forward' WHITE PAPER COM(2009) 324 final, July 3, 2009, Standardisation awareness thus needs to be considered early in the research life cycle and should be an integral part of strategic research agendas developed by European Technology Platforms (ETPs).

41. Ministerial Declaration November 24, 2005, Manchester on the occasion of the Ministerial eGovernment Conference "Transforming Public Services" of the United Kingdom Presidency of the European Council and of the European Commission, Ministers of European Union (EU) Member States, Accession States and Candidate Countries and Ministers of the European Free Trade Area (EFTA) Countries, responsible for eGovernment policy, under the chairmanship of Minister Jim Murphy, representing the UK Presidency and in the presence of European Commissioner for Information Society and Media Mrs Viviane Reding. When on affirm that "by 2010 all public administrations across Europe will have the capability of carrying out 100 % of their procurement electronically and at least 50 % of public procurement above the EU public procurement threshold will be carried out electronically."

42. The project begun on May 1, 2008 with an estimated duration of 42 months. Peppol promoted the creation of a consortium of public procurement authorities with 14 participants from 8 different countries (Austria, Denmark, Finland, France, Germany, Hungary, Italy, Norway).

43. About the e-Procurement development models and for a study of e-Procurement Benchmark in EU Member State see: Commission EU, 'Smarter, Faster, Better eGovernment, 8th Benchmark Measurement', *cit*.

44. For the Italian legal system see Art. 59 of Law n. 288 of December 23, 2001.

45. See for example the NHS supply chain or the Resah IdF, (Réseau des acheteurs hospitaliers d'Île de France)

46. See M.D. February 20, 2007, *Approvazione della classificazione nazionale dei dispositivi medici (CND)*. The price observatories are entrusted with the task of setting out standards costs, related to typologies and even territorial singularities, mainly for public work contracts. .

47. In June 2010 the functions of the OGC and Buying Solutions were transferred from H.M. Treasury to the Cabinet Office to become part of the Efficiency and Reform Group ("ERG"). The OGC website is accessible at <http://webarchive.nationalarchives.gov.uk/20110822131357/http://www.ogc.gov.uk>.

48. *Denfleet International Limited v NHS Purchasing and Supply Agency* [2005] EWHC 55 (Admin).

49. ECJ, in case C-406/08, *Uniplex (UK) Ltd v NHS Business Services Authority*, [2010] E.C.R. 11. The award criteria, with the relevant weighting to be given to each, set out in the tendering documentation sent to the tenderers, were as follows: price and other cost effectiveness factors (30%); quality and clinical acceptability (30%); product support and training (20%); delivery performance and capability (10%); product range/development (5%); and environmental/sustainability (5%).

50. The aim is to reach almost 70% of aggregate purchase.

51. Cfr: <http://www.achats-clcc.fr/>.

52. *Assistance Publique des hopitaux de Paris*: <http://www.aphp.fr/>.

53. It is composed by 60 *établissements de santé* (health care agencies), and 50 *établissements médico-sociaux* (medico-social agencies), and 10 *structures de coopération inter-hospitalières* (structures for the co-operation inter-hospital). See: <http://www.resah-idf.com/>.

54. C. giust. CE, sez. IV, June 11, 2009, in C-300/07, *Hans & Christophorus Oymanns GbR, Orthopädie Schuhtechnik v AOK Rheinland/Hamburg*.

55. Art. 100, Tuscan Regional Law no. 40 dated February 24, 1995, Regulating regional health service, provides for strengthening the role of the consortiums, by converting them into Organizations for Technical-Administrative Services to Vast Areas (ESTAV). Central Tuscany ESTAV (Local Health Service Units of Florence, Prato, Pistoia, Empoli; University-Hospital Companies of Careggi and Meyer in Florence) Northwest Tuscany ESTAV (Local Health Service Units of Lucca, Massa-Carrara, Versilia, Pisa, Livorno; University-Hospital Company of Pisa) Southeast Tuscany ESTAV (Local Health Service Units of Siena, Arezzo and Grosseto; University-Hospital Company of Siena).

56. Assobiomedica, "Centralizzazione degli acquisti: l'impatto sul settore dei servizi integrati di gestione e manutenzione delle tecnologie biomediche", October 2010, in <http://www.assobiomedica.it/it/analisi-documenti/ecml/index.html>, Assobiomedica, "Centralizzazione degli acquisti: l'impatto sul settore Incontinenza", September 2010, <http://www.assobiomedica.it/it/analisi-documenti/ecml/index.html>; Assobiomedica, "Acquisiti", March 2010, <http://www.assobiomedica.it/it/analisi-documenti/ecml/index.html>.

57. Art. 26, clause III, law 488 of 1999, in replacement, first, of art. 3, clause 166, of *Law no. 350 of December 24, 2003*, and later of art. 1, *L.D. no. 168 of July 12, 2004*, the conditions set in the framework agreement define a sort of benchmark that must be complied with by all procuring

entities, even when they decide to have recourse to their own awarding procedure with a view to try and obtain better conditions.

58. State Council, Sect. V – November 23, 10-n. 8158; State Council, Sect. V – February 2, 09-n. 557, S. Ponzio, 'La verifica di congruità delle offerte rispetto alle convenzioni Consip negli appalti pubblici di forniture e servizi? (2009) *Foro amm.* - C.d. S., 2355

59. Commission EU, 'Green paper on expanding the use of e-Procurement in the EU', October 18, 2010.

Commission EU - Internal Market, 'Study on the evaluation of the Action Plan for the implementation of the legal framework for electronic procurement – Analysis, assessment and recommendations', *cit.*

60. Explanatory Note – Framework Agreements – Classic Directive, available on http://ec.europa.eu/internal_market/publicprocurement/docs/explan-notes/classic-dir-framework_en.pdf.

61. The trade-off between competition and efficiency in incomplete framework agreements is analyzed more formally by Albano and Sparro 2008 in a stylized two-stage model with horizontal differentiation.

62. In particular, the EU Directive 18/2004/CE (Art. 32) states that "When awarding contracts based on a framework agreement, the parties may under no circumstances make substantial amendments to the terms laid down in that framework agreement". A possible rationale for this prescription is that substantial changes to the tenders at the call-off stage would represent a harmful distortion of the first-stage competition.

63. Agenzia Italiana del farmaco, 2009 report retrievable from <http://www.agenziafarmaco.gov.it/it/node/9431>.

64. World Health Organization, "A Quality Model Assurance System for Procurement Agency", 2007, retrieved from www.who.int/medicines/publications/ModelQualityAssurance.pdf

65. European Parliament and of the Council Directive 18/2004 of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts [2004] O.J. L134/114. See also: Commission (EC), DG Enterprise and Industry, 'The lead market initiative' (2009).

66. Commission EU, 'Public procurement for a better environment', COM(2008) 400 Final, July 16, 2008.

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