Barriers for energy efficient public procurement in south-east Europe – a market perspective

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Abstract

In the course of the project "Upgrading of Energy Efficient Public Procurement for a balanced economic growth of SEE area – EFFECT" that aims at aligning and raising the level and the uptake of energy efficient public procurement in South-East Europe, a study was undertaken in order to identify the perspective of the market on the current state of energy efficient public procurement and its main weaknesses.

The project team conducted a survey in order to investigate the perception of 94 companies in eight South East European countries about a) the uptake of energy efficient public procurement by public authorities, b) the barriers that the supply side faces when selling or trying to sell their energy efficient products or services to public authorities and c) possibilities to overcome these barriers. Companies included in the study operate mainly in the sectors of construction, transportation, lighting and information and communication technology. An analysis of the results indicates that a time consuming tendering procedures established to increase transparency might hinder some companies from even offering their solutions to public authorities. Findings also suggest that the expertise of public procurers needs to be increased; not only the technical expertise regarding the products and services to be procured but also the expertise to apply new ways of financing energy efficient solutions, as some often seem to be more expensive, at least in terms of investment costs. The study also manifests the necessity to increase the involvement of the supply side in studies about energy efficient public procurement.

Introduction

Public procurement of products, services and works, in the following text also referred to as "solutions", is currently seen as an important market-based policy instrument to reach not only environmental, but also economic and social targets. The European strategy for smart, sustainable and inclusive growth, "Europe 2020" (European Commission, 2010) mentions this instrument in several of its flagship initiatives.

The discussion of the use of green public procurement (GPP) in the European Union intensified after 2003 when the European Commission encouraged member states to draw up publicly available action plans for greening their public procurements (Commission of the European Communities, 2003). The GPP concept arises from the idea that public authorities can use their spending of around 19 % of the Gross Domestic product (European Commission, 2011) to invest in greener solutions and thus, not only reduce their environmental footprint but also send a strong incentive to the market to further invest in this direction.

With its communication in 2003, the European Commission offered a voluntary approach towards GPP. Since then, European legislation was passed in the form of directives, making GPP provisions mandatory in the field of road transport vehicles (European Parliament and Council, 2009) and buildings (European Parliament and Council, 2012). Regardless of whether the instrument is voluntary or mandatory, the use of green public procurement in public authorities has not taken a smooth course. The latest European monitoring study "The Uptake of GPP in the EU" (Renda, 2012) shows that only a fourth of the contracts signed in 2011 by public authorities in the EU27 used the green criteria offered by the Commission. It also highlights that the uptake varied considerably, not only between member states but also between product groups.

There are a growing number of studies in the field of green public procurement. The majority of these studies focus on public authorities. In contrast, the perceptions of the market, the companies that either supply public authorities with their products, services and works or that want to become suppliers are often not included. This is surprising, given the fact that one of the main purposes of green public procurement is market transformation. Therefore, a closer look not only at the impact that green public procurement has on the market but also on the perceptions of the actors on the market, might result in a more comprehensive coverage of the topic. The perception of companies is very informative and vital to tackling issues such as: a) the uptake of energy efficient public procurement b) the barriers to energy efficient public procurement and c) the possibilities to overcome these barriers.

In the course of the project "Upgrading of Energy Efficient Public Procurement for a balanced economic growth of SEE area – EFFECT", co-financed by the South East Europe Transnational Cooperation Programme with a view to align and raise the level and the uptake of energy efficient public procurement in South-East Europe, a survey focusing on the supply side was undertaken. The survey investigated the perception of the supply side about the uptake of energy efficient public procurement by public authorities as well as barriers that the supply side faces, when selling or attempting to sell their energy efficient solutions to public authorities. The results of this research are described in the course of this paper.

The Supply Side Survey

METHODOLOGY

The supply side survey was based on the opinions and estimations of companies' representatives, mainly chief executives or employees that are responsible for sales. Interviews with the help of a questionnaire were the selected survey method.

It was decided that in each of the 8 South East European countries under survey – Austria, Bulgaria, Greece, Hungary, Italy, Romania, Serbia and Slovenia – about 14 companies that comply with the requirements mentioned above should answer the questionnaire. This number could not be reached in every country because many of the companies contacted, declined. This might have been due to the sensitive information required, existing company policies not to take part in research done by external parties or the lack of time and/or interest. In principle, smaller companies agreed more often than bigger companies to answer the questions. The following results refer to interviews with 94 companies. Some of them were the local or national branches of international companies. Their answers reflect only the situation on their home market.

Companies included in the questionnaire were the ones that complied with the following requirements:

- The company operated in one of the five sectors "construction", "lighting", "transportation", "information and communication technology (ICT)" and "health care". These sectors were chosen because public authorities are important customers and the topic energy efficiency is of relevance.
- The company offered energy efficient solutions.
- The company was interested to offer its products, services and works (also called solutions) to public authorities. In principle, there are three different ways how companies can offer their solutions to public authorities: By taking part in public tenders, by trying to sell their solutions in form or a direct award or by working as a subcontractor for a company that has a contract with a public authority (this is often the case in the field of construction).

The questionnaire consisted of four distinct sections:

- The first section asked about the company, its energy efficient solutions and the tasks and responsibilities of the interviewee (11 questions).
- The second section asked about the interviewee's knowledge of regional and/or national energy efficient public procurement strategies and the support the company gets to increase the energy efficiency of its products, services and works (6 questions).
- The third section asked mainly about two specific offers, one in which the company offered one of its energy efficient solution to a public authority as well as one in which the company offered one of its conventional solutions. The section offered different kinds of questions to companies that mainly took part in public tenders, that sold in form of direct awards or that worked as a subcontractor (around 15 questions).
- The final section asked about the company's perception of the overall obstacles relating to energy efficient public procurement (8 questions).

The answers were collected either during telephone or face-to-face-interviews. The greater part of the questionnaire consisted of "closed questions", which offered given answers and a possibility to make further individual comments. In addition, some of the questions were "open", meaning they did not offer given answers. Usually, the questionnaire was forwarded to the interviewees in advance, in order to make sure that the information needed was available during the interview (eg. the number of employees).

BREAKDOWN OF COMPANIES INCLUDED IN THE SURVEY

The 94 companies can be classified into the sectors *construction* (buildings as well as infrastructure), *lighting*, *ICT*, *transportation* and *others* (health sector, etc.). Figure 1 shows the number of companies from the different sectors included in the survey.

More than half of the interviews were conducted with companies from the construction sector. 18 interviews were conducted with ICT-companies, 10 with companies from the lighting sector and 6 with companies from the transportation sector. The companies offered energy efficient solutions in form of products, services and/or works, like:

Energy efficient solutions in the construction sector:

- Design of low or zero energy houses (architects).

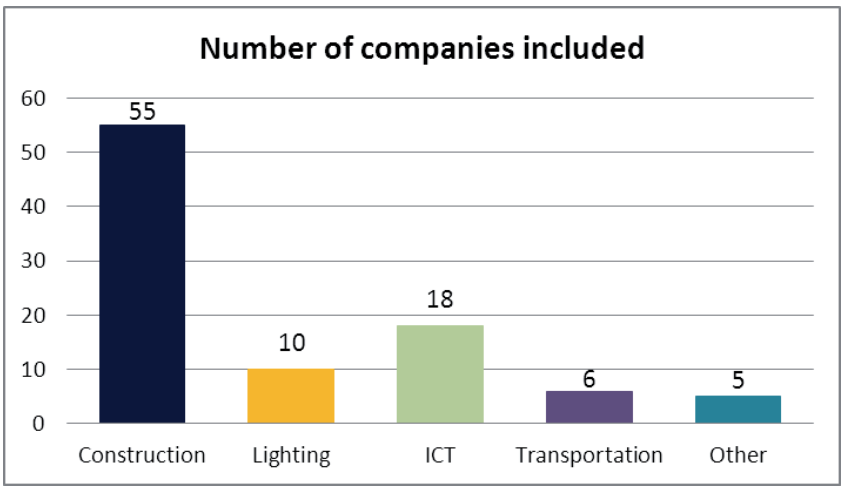

Figure 1. Numbers of companies from the different sectors included in the survey.

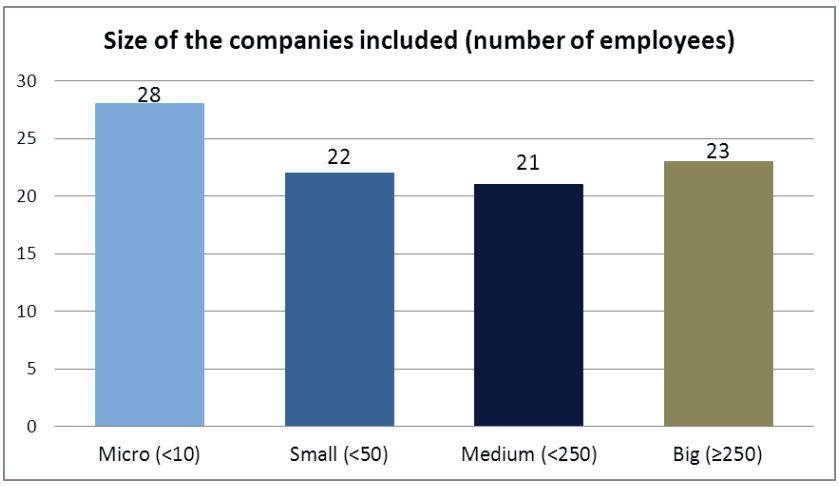

Figure 2. Numbers of companies of different sizes included in the supply-side-survey.

- Energy efficient *heating-, ventilation-, and air conditioning-*systems.

Energy efficient solutions in the ICT sector:

- Energy efficient multifunctional devices.
- Design of energy efficient computer centres.

Energy efficient solutions in the lighting sector:

- LED-lighting.
- Study about the costs of changing the lighting in buildings.

Energy efficient solutions in the Transportation sector:

- Cars with a hybrid or electric drive.
- EEV (enhanced environmentally friendly vehicles) buses.

Figure 2 shows the number of micro companies (less than 10 employees), small (less than 50 employees), medium (less than 250 employees) and big companies (250 employees and more) included in the survey.

While most of the interviewed companies were companies from the construction sector, the number of different sized companies included in the survey can be seen as balanced, with a slight majority of micro-sized companies. It is to be noted that a larger amount of micro companies especially in the construction sector took part in public tenders as a subcontractor. As stated before, smaller companies were more likely to take part in the survey than bigger companies.

In Figure 3, the companies are divided according to the percentage of their energy efficient solutions sales out of total sales. The figure is nearly balanced: 30 companies sold more than 80 % energy efficient solutions, while 28 companies sold more than 80 % conventional solutions.

The companies were also asked about the percentage of their sales made directly with public authorities (see Figure 4). Only 19 companies sold more than 40 % of their sales directly to

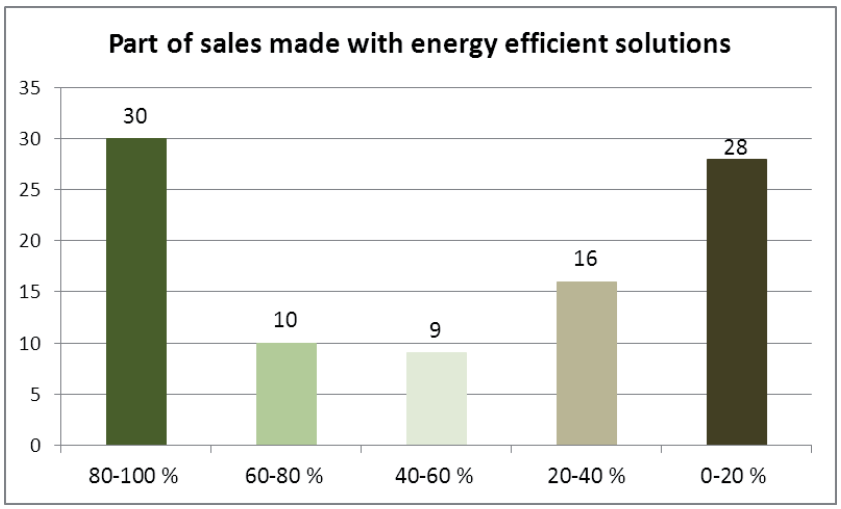

Figure 3. Number of companies with different sales percentage of energy efficient solutions.

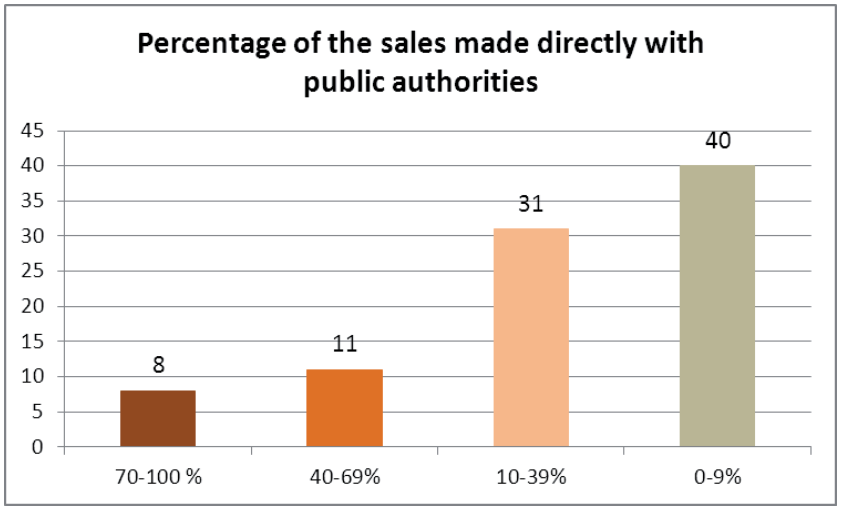

Figure 4. Number of companies with different percentages of sales made with public authorities.

public authorities. That implies that for a small number of companies, public authorities were the main customer.

Findings and analysis

Below, the main findings of the survey are presented: The perception of the companies about the uptake of energy efficient public procurement in their countries, barriers to energy efficient public procurement and possibilities to overcome these barriers.

UPTAKE OF ENERGY EFFICIENT PUBLIC PROCUREMENT

The companies were asked how important the topic energy efficiency has been in public purchases during the last 3 years. Figure 5 shows the results.

No Austrian and Bulgarian company had the impression that energy efficiency was unimportant in public purchases. More than 20 % of the Austrian and nearly 60 % of the Bulgarian companies even stated that it was of major importance. The perception of companies in Greece, Hungary and Slovenia was divided – some representatives mentioned that the topic was not important, others that it was still not very important and on the contrary, others that it was of major importance. None of the companies in Italy, Romania and Serbia claimed that energy efficiency was of major importance in public procurement.

Figure 6 shows the perception of companies according to the sector they come from. According to the figure, nearly a fifth of companies in the sectors construction, ICT and transport replied that energy efficiency was not important in public purchases. This is especially surprising in the sector transport, as it is mandatory for public procurers to include energy efficiency when purchasing road vehicles, according to Directive 2009/33/EC (European Parliament and Council, 2009) that had to be implemented in the member states until 4th December 2010.

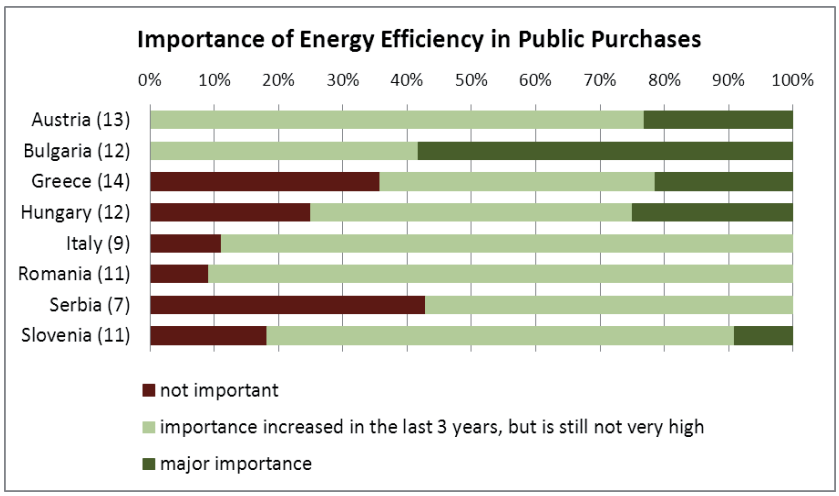

Figure 5. Importance of energy efficiency in public purchases according to the companies.

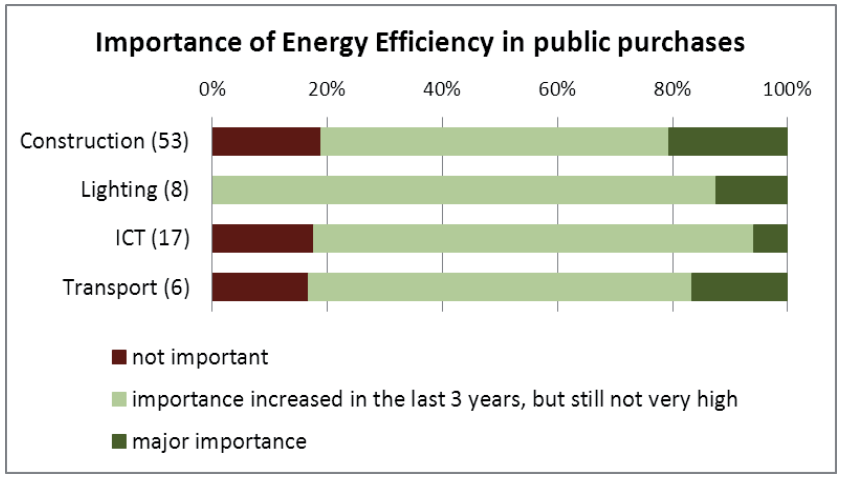

Figure 6. Importance of energy efficiency in public purchases in the four sectors.

On the whole, these results cannot be compared to the results of the European monitoring-study about the uptake of green public procurement in the EU (Renda, 2012), mainly due to the fact that the monitoring-study asked about green criteria which include also environmental criteria other than energy efficiency. Nevertheless, one comparison is possible: The monitoring-study showed that "energy efficiency" was included in the contracts by 65 % of public authorities when procuring ICT, by 60 % when procuring vehicles and by 32 % when procuring buildings. These results that apply to the EU27 are considerably lower than the result of the supply-side-survey at hand that shows in Figure 6 that more than 80 % of the companies in the 8 South East European (SEE) countries perceive energy efficiency in public purchases to be of major or at least increased importance in the sectors ICT, transport, construction and lighting.

Future studies about the uptake of green public procurement could benefit from including not only the demand side but also the perceptions of the supply side. Nonetheless, one of the best ways to monitor the uptake of green public procurement would be to analyse the tender documents (or the contracts). The study "Green Public Procurement in Europe" (Bouwer, 2005) analysed the tender documents, invitations for which, were published on the European website Tenders Electronic Daily (TED). Yet, this approach is time consuming (in 2009 over 150,000 invitations to tender were published) and covers only a small amount of tenders: those above the threshold values, which are published on the website TED. Other tender documents are usually not easily available. The European Commission estimates that the invitations to tender that were published on the TED-website represent only a fifth of the budget that the public sector in the EU spends (European Commission, 2011).

BARRIERS TO ENERGY EFFICIENT PUBLIC PROCUREMENT

Some barriers are related to the way public procurement is conducted

The companies were asked about their main barriers to take part in public tendering processes. The answers "difficulties to invest the time to fill in the tender documents", "too small to take part in public tenders" and "not enough staff" were of-

fered. These three answers are interrelated, but they focus on different aspects of scarcity in connection with the participation in a tendering process. Once, the focus is on the time to be invested, once on the size of the company and once on the availability of employees. 40 % and more of the companies in Austria, Greece and Hungary as well as 50 % and more of the companies in Bulgaria, Italy, Romania and Slovenia highlighted the difficulty to invest the time to fill in the tender documents as one of the main barriers to take part in public tenders (see Figure 7).

A public procurement process that is seen as time consuming might also be a drawback for public authorities, for example if new companies with innovative solutions do not take part in the tendering process or if the amount of tenders is shrinking. Public authorities should therefore reduce their requirements for supporting documents as much as possible, without of course risking their quality.

Figure 8 shows the importance of the barriers according to the size of the company. Interestingly, the barrier to "invest the time for tender documents" applied to companies of all sizes, big companies as well. At the same time, the barrier of "being too small to take part in public tenders" was true for nearly 40 % of the micro companies (with less than 10 employees) but only for 10 % and less of small, medium and big companies.

Energy efficient solutions tend to be more expensive, at least in terms of investment

The companies were asked if they were successful in selling their energy efficient solutions to public authorities. Those that were not successful were asked about the reasons for their lack of success. Their answers are depicted in Figure 9.

A considerable number of companies attributed the fact that energy efficient solutions were more expensive than conventional ones as the main reason for their lack of success. This result means that these companies experienced that the selection criteria was based on the price of the offers and not their life cycle costs.

Furthermore, 50 % and more of the companies in Italy, Romania, Slovenia and Serbia stated that one reason for their lack of success was the fact that tenders explicitly asked for conventional solutions. This might have different reasons, for example the tendency of public procurers for business as usual or the lack of knowledge of public procurers about energy efficient solutions. It could also refer to the companies and their difficulties to communicate the benefits of their energy efficient solutions to public procurers.

SUGGESTIONS TO OVERCOME THE BARRIERS FOR ENERGY EFFICIENT PUBLIC PROCUREMENT

Advocacy for energy efficient solutions

Companies that were successful in selling their energy efficient solutions to public authorities were urged to name the reasons for their success. The majority of companies, but especially those in Austria, Bulgaria, Hungary, Romania, Slovenia and Serbia, considered their activities in convincing public authorities as the key reason. A considerable number of companies in each country also said that the fact that public authorities asked for the energy efficient solution was a factor vital to their success.

Ask for energy efficient solutions, ask for quality and award the contract based on the life cycle costs

In three open questions, the companies were asked about the necessary changes that, if in place, would help them sell their energy efficient solutions to public authorities. The responses to these questions offer information about how to overcome the barriers for companies to sell their energy efficient solutions (see Figure 11).

50 % and more of the companies in Austria, Greece, Romania, Serbia and Slovenia said that they would increase their sale of energy efficient solutions if the public procurers would ask for energy efficient solutions and for quality and if the contract would be awarded based on the life cycle costs and not on the price of the offer.

Increase the knowledge of public procurers

This result is connected to another: 40 % and more of the companies in Austria, Greece, Italy and Serbia said that an increased knowledge of the public procurers might support their sale of energy efficient solutions. Only public procurers with an increased knowledge know what kind of energy efficient solutions are offered by the market, what kind of risks they offer and how the life cycle costs are best calculated.

Discussion

The results of the supply side survey show that the task to green the market is not an exclusive task for the demand side, but it also applies to a growing number of companies, especially to those with a larger share of energy efficient products, services and works. Therefore energy efficient public procurement should not be tackled as something pertaining to the demand side. In fact, the perspective of the supply side should be more often included in studies as well as in the discussion about energy efficient public procurement.

The results of the Supply-Side-Survey suggest that there are far more similarities than differences on how companies from different countries, sectors and sizes perceive the main barriers for selling their energy efficient solutions to public authorities as well as what they suggest to overcome these barriers.

One of the main barriers for companies in selling their energy efficient solutions to public authorities is not connected with the energy efficiency of the solution, but with the way public authorities have to conduct their procurement. A bureaucratic procedure makes it difficult for companies to invest the time to fill in the tender documents. Furthermore, this time consuming and bureaucratic procedure does not entice companies, especially newer ones which have little or no experiences with the tendering process, to build up the necessary expertise and to enter such a process. This barrier could be reduced by educating companies about the tendering procedure and by training them on how to take part in a public tender. The barrier could further be reduced by asking for as few documents as possible. This can be done, for example with the help of national electronic procurement platforms on which companies can register their documents that are needed for public tenders and thus, do not have to offer them in each tendering procedure. These platforms exist, for example in Austria (see www.ankoe.at). It should be taken into account that the tendering procedure of public authorities is in a way

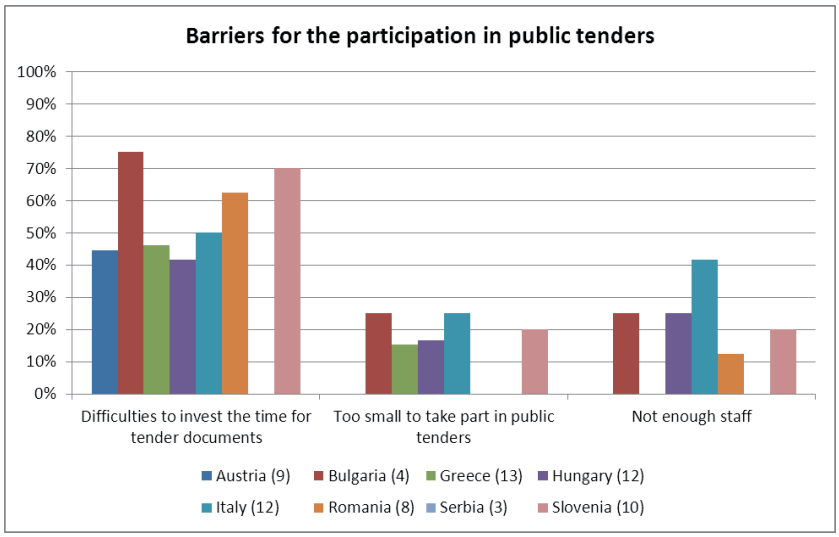

Figure 7. Importance of barriers for the participation in public tenders.

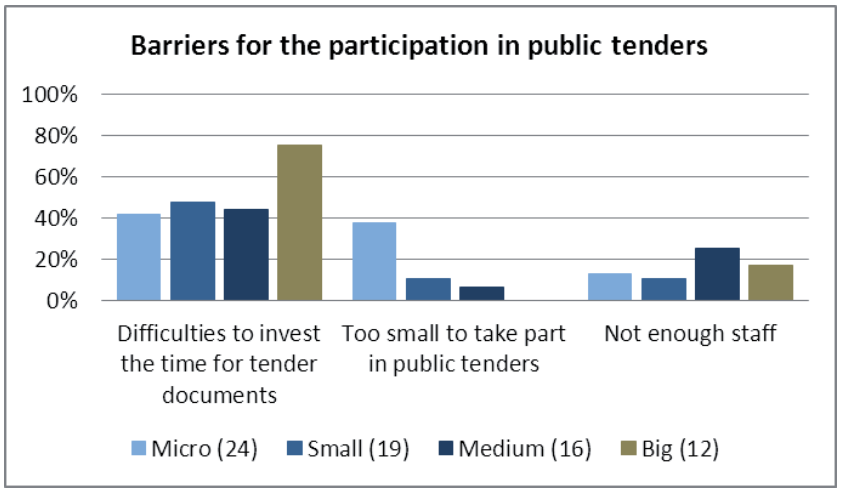

Figure 8. Importance of barriers for the participation in tenders divided by the size of the company.

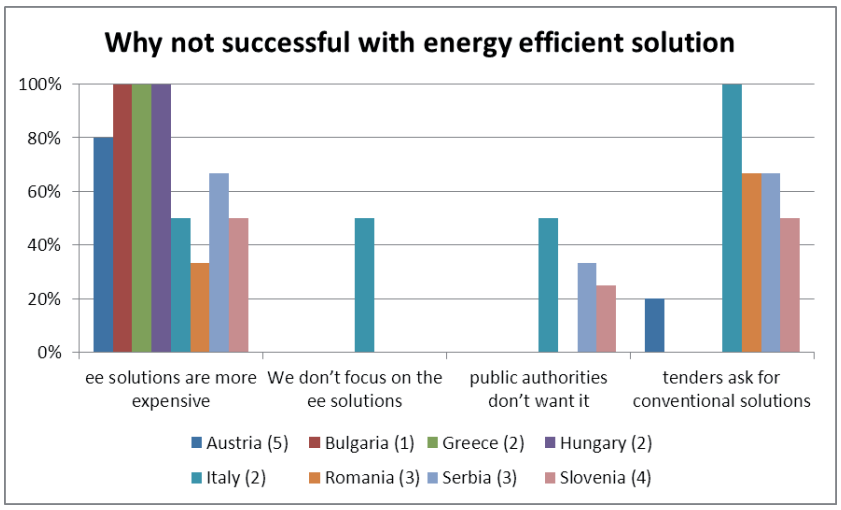

Figure 9. Why companies were not successful in selling energy efficient solutions to public authorities.

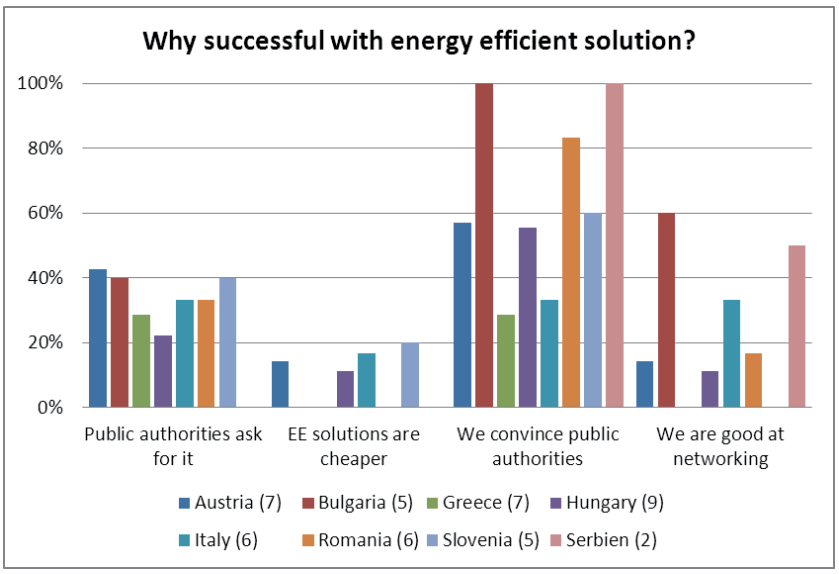

Figure 10. Why companies were successful in selling their energy efficient solutions to public authorities.

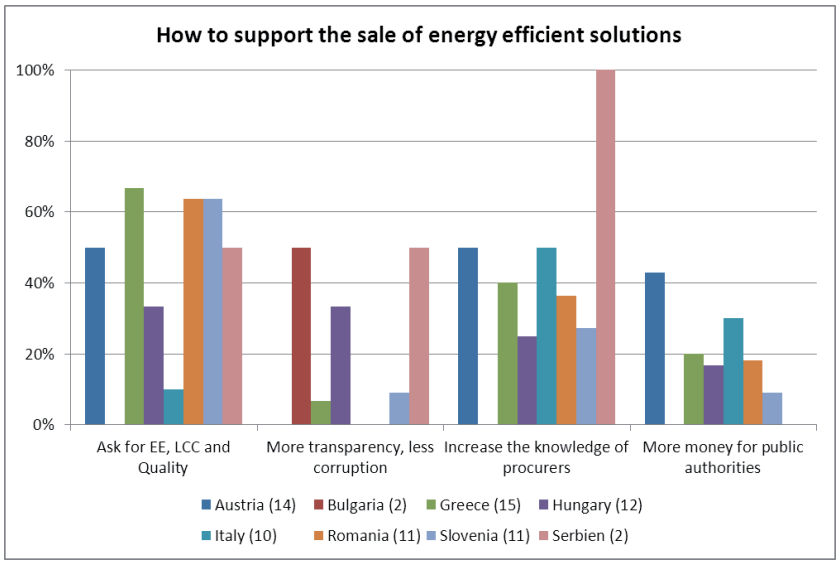

Figure 11. What could support companies in selling their energy efficient solutions to public authorities

bureaucratic and not flexible so as to serve its main purpose, the intention to reduce corruption and discrimination and to offer a transparent procedure. This does not translate that there is no corruption and discrimination in the tendering procedures of public authorities, but, at least, it seems to be significantly reduced.

Energy efficient solutions are often solutions that involve new technologies or a new design. A barrier to the public procurement of energy efficient solutions seems to be the lack of expertise of some public authorities responsible for the purchasing. For example, in the case of the renovation of a public school several public authorities might ask for a conventional ventilation-system and award the contract to the lowest bid because they lack the knowledge of the energy efficient technologies available on the market, their prices and life cycle costs as well as the risks they offer. This can be addressed either by the responsible public authority developing the expertise itself or at least developing enough expertise to consult external experts and to assess their suggestions.

The survey illustrates that energy efficient solutions often seem to be more expensive than conventional solutions, at least in terms of investment costs. Even if the different offers are assessed based on their life cycle costs - which is still not often done (see Renda et al. 2012) – instead of their purchase prices, public authorities either have to spend more money (at least in the short term) or have to use other forms of financing. Borg et al. (2003) suggested new financing mechanisms, like "Saving Sharing", "Third-Party Financing", "Energy Performance Contracting", in an early study about the barriers to energy efficient public procurement". These are currently practiced only by some public authorities and for which expertise in the public authorities also needs to be increased. Increased expertise of public authorities, increase in financing mechanisms and an overall boost to energy efficiency pub-

lic procurement is expected as a result of the implementation of the Energy Efficiency Directive (European Parliament and Council (2012), required to be transposed into national legislations by 2014. The 2012 European Commission initiative and launch of the EU Energy Performance Contracting Campaign aiming to facilitate capacity building and "support Member States and market actors with rolling out of functioning energy services market" also marks important steps in this direction.

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