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MASTER THESIS

An Empirical Analysis of Industrial Trade in Public Procurement

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BE309E



Abstract

Public procurement is seen as an essential part in the aim of a single European market. The inclusion of international suppliers is important for this objective, and the EU has established common legislation to promote access for international suppliers. However, regardless of the legislation, it is claimed that the location of the supplier is seen as the first step in the selection of suppliers. This study therefore investigates the number of international suppliers, and the nationality of the supplier relative to the nationality of the contracting authority. The analysis is based on contract awards of public procurement issued from the 28 member countries in the EU. It represents an explorative and descriptive study, with the purpose of revealing the patterns of trade in the EU public procurement market. With data from 2621 previous contract awards, and theories of international trade, this study examines the data in terms of cultural distance and geographical proximity. The findings identify favourable behaviour towards domestic suppliers where 89,1% of the examined contracts is awarded to national suppliers. However, in terms of the international contracts, it is evident that the trade of public procurement is largely concentrated within the EU, with 87,2% of the examined contracts. More specifically, three patterns of trade within public procurement are found. Ireland and the United Kingdom forms a pattern strongly related to cultural distance and geographical proximity. Germany appears as a highly attractive actor in the public procurement market as the country receives contracts from almost all of the EU countries. Latvia, Lithuania and Estonia form a pattern of international trade, reinforced by mutual trade, and strong connections in culture and geography.

The empirical findings of this study provide a disclosure that the aim of the single European market have not met its expectations in terms of cross border trade in the public procurement market. The results show that the international trade is affected by cultural distance and geographical proximity, which implies that the EU legislation not necessarily functions to its purpose.

Key words: the European Union, the single market, public procurement, and international trade.

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1. Introduction

This chapter will give an introduction to the study that has been conducted, by first providing an explanation of the background for this thesis followed by a discussion of gaps in the literature. Further, the research question and the intended contribution to the literature will be presented. Lastly, the chapter will review the framework of the limitations and structure concerning particularly this paper.

1.1 Background

The European Union (EU) is of significant importance in international business, as the EU and the single market have a major influence on the trade practices around the world (Fan, et al., 2014). The aim of the single market is to create an equal competition among national and international actors (Sorenson and Kanavos, 2013), and foster a growing participation of international actors in the development of international trade. However, later studies provide findings that the cross-border trade within the EU is rather limited (Fee and McIlroy, 1998). Twenty years after the establishment of the single market, it is stated that the market has not met the expectations that politicians and the business community had intended (Bjerkholt, 2014).

Public procurement is seen as a significant activity in the single market (Costantino et al., 2012), and represents today 19 per cent of the European Community GDP (Alvarez-Rodríguez, et al., 2014). Public procurement is regulated by strict legislation, in order to provide equal opportunities for all countries, and to create transparency. The public sector wants to include international suppliers in order to enhance the competition (Arlbjørn and Freytag, 2012), and to improve the single market for each member state (Sorenson and Kanavos, 2013). However, debates on the extent of international trade in the EU, has been on going (Alvarez-Rodríguez, et al., 2014). Literature indicates that business activities are limited to national performance (Curran and Zignago, 2011). Earlier research has found that the legislation is not necessary practiced; as it is argued that contracting authorities actually choose the supplier based on their location (Carter, et al., 2010).

There has been a lack of research fully devoted to the cross-market phenomenon in the EU (Chung, 2005). As one of the world's greatest actors, representing a fifth of the world trade, the EU is a highly relevant and interesting topic. Thus, literature recommends future studies to emphasize trade within the EU, as the foundation affects both member countries and non-member countries (Karacaovali and Limão, 2008). In addition, few empirical studies emphasize the procurement practices in Europe, at least in a comparative approach (Sorenson and Kanavos, 2011).

Today's literature addresses questions on the degree to which international business truly is global. Various debates have reviewed the scope of globalization, and its extensive and accelerating phenomenon. Empirical studies have examined business activities, in terms of it being local, regional or global. Research has found that international trade is limited in terms of global trade, and that the trade patterns are rather extending towards clusters (Curran and Zignago, 2011).

Literature encourages future research to examine public authorities' purchasing behaviour of being favourable to domestic suppliers (Martin, et al., 1997). In the same manner, there has been lack of research focusing on discrimination of international suppliers in procurement (Evenett and Hoekman, 2005).

1.2 Research question

Regarding the main subject of public procurement in the EU, there is a lack of research in many areas. Literature encourages research to emphasize the extent of international trade within the EU, discrimination in public procurement, and the practice of the legislation. The purpose is thus to examine whether the trade of public procurement are national or international, and to identify the patterns or clusters that occur. The main research question that this paper seeks to answer is defined as following:

What patterns exist in public procurement trade within the EU, and what are the driving factors that shape these patterns?

More specifically, this thesis will examine to what extent cultural distance and geographical proximity are related to patterns of public procurement trade.

The dissertation will be done through examination of previous contract awards of public procurement, issued from the 28 EU countries. The nationality of the public authorities and the awarded supplier will be assessed, and then analysed in terms of cultural distance and geographical proximity. By examining the existing patterns of international trade between the EU member states, this paper seeks to identify if the majority of public procurement trade is domestic or international.

This paper contributes to the existing literature in multiple ways. First, it provides research directly related to trade between the member states of the EU. It will also contribute with empirical results within the industrial market, where it will compare the different countries and clusters of countries, in terms of international trade. This paper will give an understanding about public procurement in relation to trade, and assess which country trades with which country, and thus provide an indication of the countries that are the leaders of the market. It will also discuss the level of discrimination of foreign suppliers, in terms of the proportions of national and international contracts.

This thesis will also give a contribute to suppliers, as the patterns that occurs can be used in the assessment of strategic planning, in order to determine which country it may be beneficial to submit a tender in. It can also provide information about opportunities within public procurement. Lastly, this paper will provide an indication on how public procurement stands in relation to integration in the single market, and contribute to the current debate about the degree of international trade within EU.

1.3 Limitations

This study is limited to the utilities sector of public procurement in the EU. Cultural distance and geographical proximity are emphasized as factors of trade. The theory presents other factors that may influence trade within the public procurement, but these topics will not be presented or discussed in detail, as they do not take part in the concentrated area of this research. Politics and economics are of significant

importance in this context, and even though these aspects are mentioned further in this study, they will neither be discussed in detail as they are not the scope of this study.

This thesis is also limited to the information on suppliers from the published contract awards. Other elements of the contract award, as criteria, procedure or price could have been included, but these elements are not found relevant to trade patterns.

Due to the lack of research directly related to trade of public procurement in the EU, especially within the industrial market, it is chosen to use theories on international trade in general, and apply the theories to suit the industrial public procurement market.

Other trading blocs will not be discussed, nor will domestic differences in public procurement trade be assessed. Infrastructure, development, and price levels are relevant, but not the scope of this paper, as it is limited to countries and trade.

1.4 Structure

The introduction of this thesis has now been presented, and the further structure of this study is as follows. The theoretical framework is placed in chapter 2, and will first examine the EU and the single market. Public procurement, related legislation and the award process of contracts will then be explained, as public procurement is an essential part of the EU and the single market. Further, the industrial market will be described, followed by a presentation of cultural distance and geographical proximity, and how these aspects can influence the international trade of public procurement. Chapter 3 will describe the methodological choices of this study, which will shape the forthcoming analysis. The analysis and discussion will then take place in chapter 4, which will reveal the findings of this study. The analysis will reflect cultural distance and geographical proximity, and will present the patterns of trade that occur in the international public procurement market. Conclusions and implications will take place in chapter 5, describing the main findings and the recommendations. Lastly, further research will be proposed.

2. Theory

The theoretical foundation in this master thesis will first present an introduction to the EU and the single market, followed by a discussion of public procurement. Further, the industrial market, and domestic and international trade will be explained. Lastly, theories of cultural distance and geographical proximity will be assessed, in order to draw inferences on how these affect public procurement trade, in order to create a foundation for the further analysis.

2.1 The EU and the single market

The European Union (EU) is an economic and political foundation, which contains 28 member states within Europe. The aim of EU is to create a single community among the European nations, with the purpose of preventing future political and economical conflicts between the member states (European Union, n.d.). One of the objectives of the single community is to create an internal market, also called a single market, which mainly fosters an idea of an open competition (Tøtlandsmo, 2007). The single market will align the countries in Europe, to achieve economic and social progress by reducing the fragmentations in Europe (Spolaore, 2013). Thus, the single market allows more firms to have access to business opportunities, as well as the ability to strengthen their strategic and economical position (Potts, 2000). The optimal internal market creates a scenario of high competition and increased number of participants, due to a larger, single market of cross border trade (Potts, 2000; Carayannis and Popescu, 2005).

Table 2.1 provides an overview of the EU member states, and the codes of each country that will be further used for the following tables, charts and figures.

The European Union			
AT (Austria)	EE (Estonia)	IE (Ireland)	PL (Poland)
BE (Belgium)	ES (Spain)	IT (Italy)	PT (Portugal)
BG (Bulgaria)	FI (Finland)	LT (Lithuania)	RO (Romania)
CY (Cyprus)	FR (France)	LU (Luxembourg)	SE (Sweden)
CZ (Czech Republic)	GR (Greece)	LV (Latvia)	SI (Slovenia)
DE (Germany)	HR (Croatia)	MT (Malta)	SK (Slovakia)
DK (Denmark)	HU (Hungary)	NL (Netherlands)	UK (United Kingdom)

Table 2.1 Member states of the EU

The 28 countries in table 2.1 represent the EU, which today is the world's biggest actor of trade of goods and services, as well as global investments (Gucht, 2014). As the world's largest economic organization, the EU is of great importance to international business (Chung, 2005).

The EU has established free flow of goods, services, labour and capital between the member states. A common trade policy has also been initiated, with shared rules of customs, tax and quotas, and certain common standards and legislation in most markets. This creates a prevention against member states that wants to introduce or maintain their own national standards. Such national behaviour can actually be perceived as protectionism, because it will preserve or favour the industry and labour of the specific country. This distorts the competition and challenges the idea of a level playing field in the internal market (Tøtlandsmo, 2007).

The EU aims at integrating member states through cross-border trade (Spolaore, 2013), as the single market is proposed to be a competitor on the same level as the United States (US). The single market of the EU is estimated to be capable of outperforming the US' position as the leading economic actor in the world (Potts, 2000). Sceptics have questioned if the European countries entirely will be integrated, and claim that it will be a long, incremental process, as the barriers include different languages, values and norms, as well as different preferences in policies (Spolaore, 2013).

2.2 Public procurement in the single market

Public procurement is considered as one of the main instruments to reinforce the single market in the EU (Fee and McIlroy, 1998; Martin, et al., 1997). Public procurement can be defined as the purchase of goods and services, or commissioning of work by public authorities within all levels of governance and public institutions (Costantino et al., 2012). A public authority can be the national government, local and regional authorities, public legal bodies or associations consisting of authorities or bodies governed by public law (Publications Office, 2010). Public procurement is one of the major economic activities that public authorities addresses (Similä, 2011), and represents a significant part of the total demand of goods and services (Georghiou, et al., 2013). Indeed, within the EU, public procurement represents 16 per cent of the European Community GDP (Costantino, et al., 2012).

Procurement in the public sector is more comprehensive than the purchasing by private actors. This is due to the larger scope that includes facilities governed by the public sector, as “law and order, health, social services, education, defence, transport and environment” (Arlbjørn and Freytag, 2012: 204). Nonetheless, the procurement processes for some types of goods and services are quite similar in the public and private sectors. These goods and services are often standardized, for example “office supplies, computers and standard software packages”, which in general are produced in large volumes (Tadelis, 2012; 297). Regarding procurement of custom made products or services, as “new buildings, custom software or legal services, the public and private sectors differ significantly (Tadelis, 2012; 297). This is because procurement within the public sector is strictly regulated, whereas the private sector can purchase more freely (Tadelis, 2012; Thai, 2001). One objective of the regulation in the public sector is to create transparency in order to avoid corruptive behaviour (Tadelis, 2012). The regulations stem from the effect that public spending has on the society, which reflects the many stakeholders in the public sector. These stakeholders, combined with multiple regulatory agencies that influence the public procurement, create difficulties in the procurement process (Thai, 2001). Thus, public procurement differs from private purchasing, as the former is focused on regulation and publication, with large dependence on the bidding process, compared to the latter (Thai, 2008). The private sector, on the other hand, is driven by profit (Thai, 2001). The private sector is also engaged in the society, but mostly due to image and

business management. Stockholders interests also control the purchasing within the private sector (Reed, et al., 2005).

A report called the Cecchini Report¹ stated that an enlargement of the public procurement market could save the European Community GDP with 0.5 per cent. This was justified by the effect of increased competition in terms of price and quality. These cost savings emphasize the importance of opening the public procurement market to international suppliers (Fee and McIlroy, 1998; Martin, et al., 1997). The European Commission (EC)² identifies three beneficial elements in this opening of the market. First, the public authority can select the least expensive supplier that may be international. Second, regarding competition, national suppliers may push down their prices, as they try to compete with international suppliers, and third, as the market changes, industries must reorganize to fit the new environment. Thus, these elements offer savings and advantages for the EU and public authorities (Martin, et al., 1997).

2.2.1 Legislation on public procurement

The World Trade Organization (WTO) is a foundation that handles the international rules of trade, with the objective of making trade easier for the parties involved. This is done through different agreements, where the Government Procurement Agreement (GPA) is the applicable agreement for public procurement. The GPA is legally binding for all entities involved in a public procurement process in countries that are parties to the agreement (WTO, 2014). The GPA provides rules for the procurement process, but is not as comprehensive as the directives of the EU (Fee and McIlroy, 1998).

Today, public procurement within Europe must be in accordance with the EC Treaty of Rome³, as well the Public Sector Directive 2004/18/EC and the Utilities Sector

¹ The Cecchini Report was published in 1988, and provided the expected gains of the single market (Oxford Reference, 2009)

² The European Commission is the executive body of the EU, representing Europe's interests (European Commission, 2014).

³ The EC Treaty of Rome was signed by France, Italy, Germany, Belgium, Luxembourg and the Netherlands in 1957 with the objective of integration through trade, aimed at economic growth (Europa, 2010).

Directive 2004/17/EC (Sigma, 2011), hereafter referred to as the directives. The directives concern purchase of supplies, services and works of the public authorities, as well as firms in the utilities sector (Gelderman, et al., 2006). They also reinforce the competition between the suppliers in the market, with the aim of preventing “monopolistic or oligopolistic behaviour” (Costantino, et al., 2012: 190). One objective of the directives is to develop economic integration by promoting the access of international suppliers. The expansion of the competitive market increases the cross-border effect of national and international operators. The intention of the directives is also to make the use of resources visible, and to standardize the procurement procedures in the public sector (Regjeringen, 2006). According to the legislation, products produced and sold in one EU country are certified for sale in other member countries (Chen, 2004), which simplifies the international trade.

The utilities sector includes entities operating in water, energy, transport and postal service, and is the sector this master thesis will emphasize. The EU did not include this sector before 1993, and the directive that concerns utilities became affective in 1994 (Martin, et al., 1997). The utilities directive concerns contracting authorities or public enterprises, which continue or extend business within “gas, electricity, water, transport services and postal services, the extraction of fuels, or the provision of ports or airports” (Europa, 2012: 1-2). Principals who are not public authorities or public enterprises, but continue or extend at least one of the activities listed below, are subject to the directives, as they benefit from the exclusive rights given by an authority of a EU member state (Europa, 2012).

Activities that are covered by the directives are as follows:

- Supply or operations that will give service to the public, in terms of production, transport, or distribution or supply of gas, heat, electricity (Directive 2004/17/EC).
- Supply or operations that wants to offer production, transport or distribution of water, or the supply of water (Directive 2004/17/EC).
- Where the principal is included in the sector of “drinking water, land drainage or hydraulic engineering projects, or removal or treatment of sewage” (Directive 2004/17/EC: 8).

- Supply or operations that offer services of “railway transport, automated systems, tramway, trolley bus, bus or cable” (Directive 2004/17/EC: 27). Bus transport services are not included in the directives, as other entities are allowed to deliver bus services (Directive 2004/17/EC).
- The delivery of postal services, as “mail management services, added-value services linked to and provided entirely by electronic means, direct mail bearing no address, financial services, philatelic services and logistics services” (Directive 2004/17/EC: 28).
- The utilization of an area in order to find or extract “oil, gas, coal or other solid fuels, or provision of airports and maritime or inland ports, or other terminal facilities to carriers by air, sea or inland waterway” (Directive 2004/17/EC: 28).

These activities are included in the directives in order to achieve effective competition. If member states claim that effective competition for a given sector pre-exists, it is possible to ask the Commission to adopt a decision that ascertains that the effective competition takes place (Europa, 2012).

The directives states that contracts of public procurements must be allocated through a tender process. A tender process is that public authorities issue a request for their requirement, a contract notice, and encourage interested suppliers to submit a tender, i.e. an offer in response to the request. The process of tenders leads to competitive bidding, where the qualified suppliers compete for the award of the contract (Carayannis and Popescu, 2005).

The directives emphasize the requirement of publicity, which states that contracts where the monetary value of the procurement is above a certain threshold must be published at a public database (Bovis, 2012). The threshold value for supplies and service contracts in the utilities sector is € 414,000 and for work contracts in all sectors, the threshold is € 5,186,000. The publicity requirement is established because contracts above the thresholds are assumed to be of interest across countries, as the value is beneficial for international suppliers (European Union, 2013). The public sector wants to include international suppliers in order to enhance the competition

(Arlbjørn and Freytag, 2012), and improve the single market for the whole Union (Sorenson and Kanavos, 2013). Thus, the requirement of publicity is a significant part in the progress of the single market, as it provides easier access to both national and international business opportunities within the EU. The publicity of contracts makes information visible to all interested suppliers, which creates transparency. Transparency encourages international suppliers to participate across countries, as the demand is open and easily available (Carayannis and Popescu, 2005; Gelderman, et al., 2006; Fee and McIlroy, 1998). Hence, transparency is one of the most important aspects in public procurement (Bovis, 2012).

Other advantages from transparency are that it creates equal opportunities for both developed and developing countries, in order to extend the competition. It will also give developing countries economic growth, as they will have the same opportunities as the established suppliers with large market shares of public procurement. International suppliers contribute to increased competition, as disparities in quality and value normally pushes the best practice and the lowest price. Transparency also contributes to the elimination of corruption, as it makes information available (World Trade Organization, 2003).

2.2.2 Award of contracts in public procurement

The award of public procurement contracts includes the publication of the contract notice, suppliers submitting their tenders, an evaluation of the tenders, and the award of the contract. Public authorities must plan the contract notice carefully, as it sets guidelines for the entire process.

Figure 2.1 illustrates the tender process of public procurement in four stages.

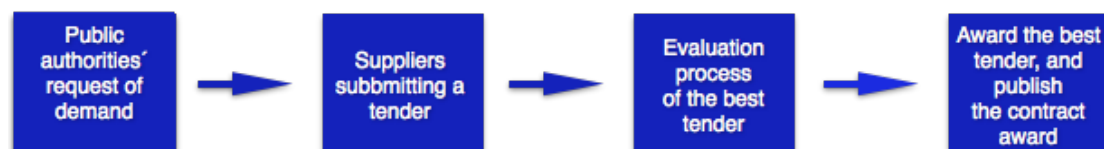


Figure 2.1 The tender process in four stages

The first and the fourth stage of figure 2.1 represent the two documents, the contract notice and the contract award, that must be published at the public database. Stages

two and three are not usually made public. Stage four represents the published contract awards that this master thesis analyses, but as all four stages are significant in the understanding of the process and the contract award, the whole process will be explained, starting from the contract notice.

The contract notice should include type of procedure and the criteria that will be used when awarding the contract (Bovis, 2012). The directives describe three types of award procedures for public procurement, which are open procedure, restricted procedure and negotiated procedure. In an open procedure all interested suppliers can submit a tender according to the contract notice. In a restricted procedure, suppliers can submit a tender only if they have been selected by the contracting authorities⁴ (Carayannis and Popescu, 2005). In a negotiated procedure, suppliers that are qualified according to the contract notice will be invited to submit a tender (Pinsent Masons, 2013). Contracting authorities and the tenderers can then negotiate the terms and conditions of the contract, with the aim of obtaining the best solutions for both parties (Carayannis and Popescu, 2005).

Contracting authorities must evaluate the tenders in terms of a criterion, which must be stated in the request (Lorentziadis, 2010). The alternative criteria are either the “lowest price” or the “economically most advantageous tender” (Tikkanen and Kaleva, 2011). The criterion of lowest price is the simplest, and means that contracting authorities must award the contract to the supplier offering the lowest price. Economically most advantageous tender is more comprehensive, and contains optional sub-criteria that contracting authorities must set. These may be for example “technical merits, quality, experience, extent and length of guarantees, maintenance cost, after sale service and life-cycle cost” (Lorentziadis, 2010:261). Each of the sub-criteria receives a fixed weight that must be published in the request. These weights are applied when contracting authorities evaluate the tenders, and the supplier with the highest overall score will be awarded the contract (Lorentziadis, 2010). Thus, this criterion is what mainly applies for contracting authorities when evaluating the best tender (Lambropoulos, 2007). It is found that in the EU, the criteria of economically

⁴ Public authorities that have issued a contract notice are further referred to as contracting authorities.

most advantageous tender is used more often, whereas lowest price is used less often (Bergman and Lundberg, 2013).

The criterion of economically most advantageous tender has been criticised since unquantifiable or non-verifiable sub-criteria may be applied, which makes it difficult to calculate the overall highest score impartially, and thus favourable behaviour may occur. For example, by giving the subjective sub-criterion of quality the greatest weight, while the objective and measureable sub-criterion of price has low, or even zero weight, it may be easier for contracting authorities to award the contract to a firm with great reputation, or to a supplier who is known to the contracting authorities due to the large weight of unquantifiable sub-criteria. Thus, the criterion of economically most advantageous tender can foster behaviour leading to bending the rules in order to act favourably towards certain suppliers. This indirectly allows contracting authorities to purchase in the same manner as private purchasers (Bergman and Lundberg, 2013).

When public authorities have decided the procedure and criteria, they must send their contract notice to the Official Journal of the EU, which includes a supplement for public procurement (European Union, 2013). This supplement handles the tender process of all public contracts issued in the EU, and thus verifies the contract notice in terms of the directives, and further publishes the contract notice at the public database Tenders Electronic Daily (TED) (Carayannis and Popescu, 2005). TED provides as many as 1 500 new contract notices every day, and consists of business opportunities in the EU, Europe and the European Economic Area (Publications Office, 2010). TED is intended to obtain participation of more firms, as TED makes access to business opportunities available to everyone (Fee and McIlroy, 1998). Hence, the TED database provides access to current contract notices, and an archive of contracts from the last five years (European Union, 2013). TED has mainly two sorts of users, namely public organizations or authorities and suppliers, which are usually privately owned firms. Suppliers can create a profile in order to receive notifications whenever a contracting authority has published an appropriate procurement contract, or a request for tender (Carayannis and Popescu, 2005).

There are about 20 000 users of TED, but it is nevertheless argued that this is a small number compared to all the existing suppliers that may be of interest for the public

sector. Earlier studies have also shown that TED is not as effective regarding easy access and economical benefit as it is meant to be. It is claimed that TED contributes to the enhancement of transparency and more request for tenders, but that this does not necessarily provide only benefits. However, the long-term benefits of TED are claimed to be positive, as the database may be used for information about markets, in terms of market access and opportunities (Fee and McIlroy, 1998).

When contracting authorities have selected the best tender, they are also obliged to publish the contract that will be awarded to the supplier (Tikkanen and Kaleva, 2011), at TED. The contract award should contain, among others, the number of tenders received, the supplier who won the contract, and the price of the supplies (Martin, et al., 1997) (see appendix 1, “Contract award template”). The contract award should also state the reasoning for the selection of the supplier. However, price and other information from the suppliers can be withheld for confidential reasons (Bovis, 2012).

In addition to the publication of the contract notice and the contract award, there is an optional publication, called the Prior Information Notice. This notice is just an indication on what public authorities intend to buy the upcoming year, which is particular of relevance for the suppliers in their planning of participation in possible upcoming contracts (Carayannis and Popescu, 2005).

The directives define the extensive process of public procurement and publicity with basis in the aim of the single market. Publication of business opportunities at TED provides efficiency and enhanced competition, as more countries have the possibility to participate. This contributes to the integration of countries through international trade, with and within EU (Carayannis and Popescu, 2005). However, stagnation for the single market results from public authorities tending to favour domestic suppliers. The directives intend to prevent unseen favourable behaviour in national purchasing (Martin, et al., 1997).

2.3 Patterns of trade in public procurement

The vast majority of the goods and services from the utilities sector are industrial, which means that the industrial market further will influence this master thesis.

Consumer goods are defined as goods that are typically bought and used by consumers, rather than goods that are used in the manufacture of other goods either as materials or the means of production (Oxford Dictionaries, 2014). The industrial market is less sensitive to differences in cultures and behaviours across countries, whereas the consumer market is very sensitive to these differences (Chung, et al., 2012; Nakip, 1999). This means that the industrial market does not meet obstacles at the same level as in the consumer market (Nakip, 1999). Preferences in industrial products are not as diverse as the preferences in consumer goods, where consumer goods may be influenced by consumers taste and habits. The lack of these preferences in industrial products, makes them more suited for marketing through an international standard, (Chung, et al., 2012; Nakip, 1999), as the purpose of using the products is probably similar in other countries (Chung, et al., 2012). Both customers of the industry market and customers of consumer goods have various needs and buying behaviour. However, industrial markets are more comprehensive compared to consumer markets, because of the diversity in products and usages. And, industrial products also differ from consumer products as they usually have much smaller market segments. The process of buying industrial products most likely involves several people and processes, whereas purchase of consumer goods typically involves only the purchaser. It is also claimed that international needs and characteristics in the processes of procurement, are more evident within industrial markets than in consumer markets (Nakip, 1999). The expected effect of standardization or adaptation is dependent on the industry one is operating in. Thus, standardization is more effective in industrial products, as the preferences of these products are perceived to be similar (Chung, 2005), and less sensitive to factors as culture, norms and customs (Chung, et al., 2012).

However, despite globalization, the effect of these factors on the evaluation and selection of goods and services is still a challenge in many industries today. It is claimed that, regardless of the directives, the location, in terms of regions or countries, is seen as the first step in the process of selecting suppliers for contracting

authorities. The region or country implies the attractiveness of the market, economic level and infrastructure, where these levels are often similar for suppliers within the same region or countries. When the choice of location is made, the selection of supplier within this region will be evaluated. Contracting authorities' perceptions will have an influence, and together with price and quality it will affect the decision-making in procurement. When choosing a new and unknown supplier, the risk in selection, and the perception of buyer-supplier communication related to the buying performance are also a part of the decision. In the end, contracting authorities opinion of regions or countries will affect the choice of supplier (Carter, et al., 2010).

This study will examine to what extent the award of public procurement contracts is affected by the location of the supplier relative to the location of the contracting authority. The location will be at a geographical country-level (Brock, et al., 2011), referring to countries and nationalities of the countries.

In the award of the contract, contracting authorities have two choices; the contract is either awarded to a national supplier or to an international supplier. If the contract is awarded to a national supplier, i.e. a supplier that shares the same nationality as the contracting authority, the award of the contract will be related to the domestic preferences of the contracting authority. If the contract is awarded to an international supplier, the nationality of the supplier will reveal if the supplier is located within the cultural cluster of the contracting authority, within the geographical proximity of the contracting authority, or if the supplier has a location that is not in relation to any of these two. This will be theoretically explained further, starting with the case of contracts awarded to national suppliers describing the theories of national preferences, and will then address the case of contracts awarded to international suppliers with description of the theories of cultural distance and geographical proximity.

2.3.1 Patterns of national and international trade

Research has shown that national borders tend to influence a country's trade. Although some countries have relatively similar cultures and are fairly well integrated, the fact that a border exists between them may reduce their trade remarkably. In this sense, borders are reducing the international trade because they are related to separation and differences, in terms of preferences of the consumers,

distance and discriminatory policies (Turrini and Ypersele, 2010). Literature suggests that the reasons for selecting domestic suppliers rather than international suppliers can refer to the domestic work relations. Contracting authorities and suppliers of the same nationality are most likely to have the same interests, as they share the same cultural and ethical perceptions. However, by including international suppliers, domestic suppliers will face difficulties as the competition in the market increases (Martin, et al., 1997).

By looking at the potential savings of opening up the internal market, it is important to explore why public authorities purchasing behaviour is favourable to domestic suppliers. This behaviour is also known as discriminatory behaviour, as international suppliers are discriminated. Discriminatory purchasing behaviour and public authorities protectionism in public procurement have been, and still are, identified as major obstacles in the completion of the single European market (Fee and McIlroy, 1998; Martin, et al., 1997). Non-discrimination is almost always a condition for trade in trade agreements, but public procurement has often been an exception to this principle. The principle of non-discrimination has only been included on a voluntary basis, or between two or more specific countries (Evenett and Hoekman, 2005). The initial objective of public procurement within the EU is to eliminate these obstacles in order to complete the single market (Martin, et al., 1997).

Discriminatory behaviour may stem from national self-interest; the desire of enhanced national economy, which is a challenge for the single market. Within public procurement, national self-interest fosters the trend of favouring domestic suppliers. It is common that local governments use their subsidies to enhance the performance of local firms, as this is usually in the government's self-interest. This causes stagnation in the single market, because it decreases the level of integration between countries. The EU's objective is that public authorities should choose suppliers with the best product, regardless of the suppliers' location or origin. National self-interest then occurs at the cost of the single market, as it is disadvantageous for international suppliers. The results of this are decreased integration and competition (Potts, 2000). National self-interest and public protectionism are still obstacles that prevent the market to progress (Martin, et al., 1997). In this sense, national self-interest and the single market are seen as opponents in the development of international trade.

By comparing domestic and international relationships between buyers and suppliers, it is found that international relationships in general are poorer as the contact between the trading parts is less and that the social distance is larger. Research also shows that the will to enhance an international relationship is lower as social distance increases, and that the duration of an international relationship typically is shorter. It is also found that the perceived quality and information sharing is better between domestic trading partners, than for international partners. In addition, it is claimed that international relationships may provide lower customer satisfaction. Parties that trade internationally will often seek to find national suppliers, in order to decrease uncertainty and complications (Burkert, et al., 2012).

Decrease of international trade may lead to border effects, which refers to when the volume of trade within a country is greater than the volume of international trade. Border effects are most likely to occur when the consumers have diverse preferences (Vanagas, 2013). It is argued that technical barriers between countries can explain border effects, but Turrini and Ypersele (2010) claim that, regarding the EU, technical barriers do not seem to be the reason. Studies of border effects in the EU are of particular interest, as the countries are anticipated to be integrated, and therefore should have a small degree of border effects. National trade barriers, as “tariffs, quotas, exchange rate variability, transaction costs, different standards and customs, regulatory differences”, may be one of the reasons for border effects, as they lead to higher costs due to the crossing of a border (Chen, 2004:94). However, research on whether national trade barriers are the antecedents of border effects has had lack of evidence (Chen, 2004).

Vanagas (2013) estimated that the European countries trade 7,5 times more domestically, than internationally. However, his study is based on all kinds of products, which means that his analysis has been more sensitive to cultural aspects and consumer preferences. As this paper concerns the industrial market within public procurement, it is reasonable to believe that the findings of this analysis will reveal a smaller degree of domestic trade than the findings of Vanagas (2013), due to the assumption that industrial products are less sensitive to culture and consumer preferences.

Another study of contract awards within works, supplies and services of EU member states, showed that an overwhelming amount of 97,9% was awarded to domestic suppliers (Martin, et al., 1997). Figure 2.2 illustrates the findings of Martin, et al. (1997).

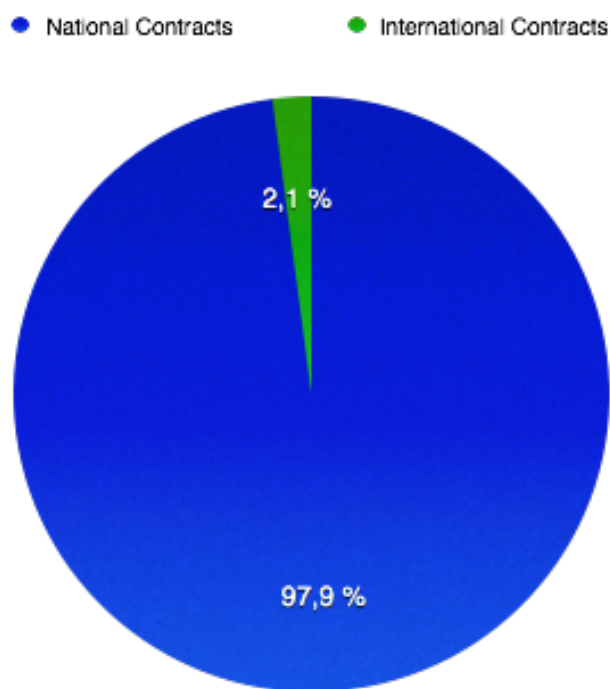


Figure 2.2 National and international contracts

Figure 2.2 illustrates that Martin, et al.'s (1997) findings indicate a significant difference in the proportions of contracts that was awarded to domestic suppliers and contracts that was awarded to international suppliers.

A group of countries that is important to note in this context is the Group of seven (G7), which have received criticism for their national focus. The G7 consist of France, Germany, Italy, United Kingdom, the United States, Canada and Japan, and represents the highly industrialized nations in the world (Laub, 2014). The G7 was formerly known as the G8, as Russia was included until March 2014 (NTB, 2014). Four of these seven countries, France, Germany, Italy and United Kingdom, are EU member states. The G7 was established to provide “major industrial power of the non-communist world a venue in which to address economic concerns” (Laub, 2014: 1) There are no criteria for being a member, but it is expected that the member of the G7 are democracies with strong developed economies. The G7 have lately been criticised

for being more focused on issues related to domestic aspects, rather than international aspects. It is claimed that even these countries do not have the political and economical influence, nor the will to act truly internationally, which is claimed to be far from the ideal G7 (Laub, 2014).

2.3.2 Patterns of cultural distance

The next two sections address the pattern of contracts being awarded to international suppliers. Brock, et al. (2011) argues that business distance, in terms of cultural and geographical distance, is still a variable affecting the current international business market. Business distance addresses different factors, such as “spatial or geographic distance, economic distance, technological distance, language dissimilarities, cultural and religious distance, time zones differences, colonial links, distribution channel differences, industry structure differences, and psychic distance” (Brock, et al., 2011: 385). However, geographical, cultural and psychical distances are mainly the variables used for measuring business distance (Brock, et al., 2011). Globalization has created interdependence between several countries, and the enlargement of integrated tendencies, which result in regionalization (Mandjak, et al., 2011). Thus, research has argued that trading activity often clusters within regions (Curran and Zignago, 2012). It is therefore interesting to examine which countries that are interdependent in terms of public procurement, and what patterns this may cause, which will be assessed through the theoretical aspects of cultural and geographical distance.

Culture is a complex concept, with several definitions. In international business, culture can be defined as the collective mind-set that separates a person or a group from others. Culture is found to be a force of great impact to peoples perceptions and preconceived attitudes, thus different cultures that interact may be an indicator of conflicts in business (Voldnes, et al., 2012).

Cultural distance may be defined as measurement of the degree that cultures are different or similar. These measurements are widely used in management of businesses. Cultural distance is a simple and standardized approach to handle the complexity and difficulties of cultural differences, and has been used to assess the decision of investment in another country (Shenkar, 2001). Trade theories define

cultural distance as the factor of why the degree of trade in some markets is relatively similar to domestic markets (Mueller, 2011). It has been claimed that companies would be more resistant to invest in culturally distant markets, because markets in other countries were unknown. Cultural distance can also relate to the high level of risk, due to operations in unknown markets. There have also been counter-arguments that larger cultural distance between two trading countries can contribute to overcome the barrier of unfamiliarity (Shenkar, 2001).

Ronen and Shenkar (2013) have made a comprehensive analysis of the cultural circumstances, and transformed it into what they call *cultural mapping*. Their report gives empirical results on how cultures can be classified, and they claim that cultural mapping captures the interaction of cultures, something cultural distance fails to do. Ronen and Shenkar (2013) use cultural clustering to find the relative similarities of countries, and thereby see how countries naturally group together. Their cultural mapping is based on the article of Ronen and Shenkar in 1985, and other research within culture clustering and cultural differences since 1985. Ronen and Shenkar (2013) have focused on three variables for each country in their analysis of clusters. These are religion, language and geography, which the report considers as the core variables, as it is claimed that these variables are aligned with other variables of culture. By applying their cultural map it is possible to examine various aspects in order to contribute in the development of theories (Ronen and Shenkar, 2013). Ronen and Shenkar's (2013) analysis found eleven clusters, where six include EU member countries. This master thesis follows and adapts the comprehensive report of culture clustering of Ronen and Shenkar (2013). Their cultural map will be applied in order to examine if trade of public procurement in the EU is affected by culture. The clusters that concern EU and Europe will be drawn out and further explained. The clusters that include EU member states, and the countries that belong to each cluster are shown in table 2.2.

Anglo	East Europe		Germanic	Latin Europe	Near East	Nordic
AU (Australia)	AL (Albania)	KZ (Kazakhstan)	AT (Austria)	BE (Belgium)	GR (Greece)	DK (Denmark)
CA (Canada)	AM (Armenia)	LT (Lithuania)	CH (Switzerland)	CH (Switzerland)	TR (Turkey)	FI (Finland)
IE (Ireland)	BA (Bosnia)	LV (Latvia)	DE (Germany)	ES (Spain)		IS (Iceland)
NZ (New Zealand)	BG (Bulgaria)	MD (Moldova)		FR (France)		NL (Netherlands)
UK (United Kingdom)	BY (Belarus)	MK (Macedonia)		IL (Israel)		NO (Norway)
US (United States)	CY (Cyprus)	PL (Poland)		IT (Italy)		SE (Sweden)
ZA (South Africa (White))	CZ (Czech Republic)	RO (Romania)		PT (Portugal)		
	EE (Estonia)	RU (Russia)				
	GE (Georgia)	SK (Slovakia)				
	HR (Croatia)	SI (Slovenia)				
	HU (Hungary)	UA (Ukraine)				

Table 2.2 Ronen and Shenkar's (2013) cultural clusters that include EU member states.

Table 2.2 shows that the number of countries within a single cluster varies, from 22 in the cluster of East Europe, to two countries in the Near East cluster. The similarities of the countries are measured based on dissimilarities, so countries that are dissimilar from all others are placed in the cluster they are least dissimilar from (Ronen and Shenkar, 2013). Each cluster contains countries that are relatively similar, thus a country in one cluster differs from a country in another cluster. Patterns of trade in the cultural clusters refer to the question of whether the specific country prefer to trade with countries that are cultural distant, i.e. in another cultural cluster, or whether the country prefer to trade with countries that are culturally similar, i.e. countries in the same cultural cluster.

Four of these clusters correspond to geography, as the cluster of Latin Europe is located in the west of Europe, the Nordic cluster in the north, the Eastern Europe cluster in the east, and the Germanic cluster in Central Europe. The Anglo cluster concerns countries of four continents, whereas the Near Eastern cluster concerns countries of two continents (Ronen and Shenkar, 2013).

Regarding the level of economic freedom, the clusters can be classified in three groups. The Anglo, Germanic, Nordic and Latin Europe clusters have a high level of economic freedom, whereas the Near Eastern cluster is in the middle range, followed by the East Europe cluster. This shows that the most developed countries are in the

first group, but if this development is a factor of culture is another study (Ronen and Shenkar, 2013).

How humans perceive the unknown may be dependent on their culture, as some cultures perceive the unknown as dangerous, while other cultures perceive it as curious. Huang (2007) found that the cultures of Greece, Portugal, Belgium, Spain, France and Italy are less tolerant to the unknown, whereas Anglo and Nordic countries have more tolerance to the unknown. This means that the countries of the Germanic and the Latin Europe clusters are not likely to trade with countries in other cultural clusters because they are less tolerant to unknown cultures. On the other hand, the cultural clusters of Anglo, Near East and Germanic are more likely to trade with dissimilar cultures, as these countries are quite tolerant to other cultures. Huang (2007) does not mention the countries in the East Europe cluster.

There is further stated that trade within clusters or regions of countries is strongly connected to today's international trading patterns. There is a tendency that the technology level is approximately equal for the countries within the region. Goods that contain higher technology tend to have an international focus, due to their international demand (Curran and Zignago, 2012), where for example Germany, a country known for their high technology level, is a large actor in the international market.

Some studies claim that the different markets within the EU will retain their cultural distance, despite the goal of the single market. This indicates that the different markets are unlikely to be similar in the future. It is argued that the EU member states have too many different cultures and histories, where these are seen as the main obstacle. Despite the implementation of a joint set of rules, it is claimed that the differences in cultures are unlikely to disappear (Chung, 2005). However, in comparison with other trading blocs in the world, the EU is identified as the most integrated region, in terms of trade (Curran and Zignago, 2011).

2.3.3 Patterns of geographical proximity

Patterns of geographical proximity in this paper refer to trade between physically close countries, which means countries that share borders. These countries are also called neighbouring or adjacent countries. Geographical proximity is defined as the “kilometric distance that separates two units in geographical space” (Nicholson, et al., 2013: 373). Geographic proximity is a phenomenon that forms interaction between industrial companies (Nicholson, et al., 2013). The interaction between geographical proximity companies concerns mainly transaction of ideas and information, knowledge and technology (Cantù, 2010).

The geography of each country, and how they are located relative to other countries affect what each country sees as local or close (Mandjak, et al., 2011). Blum and Goldfarb (2006) argue that countries geographically located next to each other tend to have similar preferences, and often accommodate each other’s preferences. Thus, geographical proximity decreases barriers of entry, and it may simplify the transfer of competence and skills due to the short distance to the other country (Shenkar, 2001). This can contribute to create a pattern of trade for neighbouring countries, as adjacent countries may prefer to trade with each other due to the decrease of entry barriers.

Other geographical variables that influence the trading patterns between countries are the size of the trading countries respective to each other and the distance between them (Vanagas, 2013; Blum and Goldfarb, 2006). Blum and Goldfarb (2006) state that a country tends to trade more with large, adjacent countries, than countries that are smaller and distant. Earlier research has shown that adjacent countries trade 48% more with each other, compared to countries that do not share a border, i.e. are more distant. The reasons for this may be the beneficial geographic location or the historical bond these countries may share. A country’s distance to other trading countries can also have an influence, e.g. the trade between Spain and Portugal can be affected by France’s willingness to trade with Spain, as the goods from Spain that normally would go directly to Portugal, now may be exported to France (Vanagas, 2013).

The EU, especially for the countries that shares borders with both EU member states and non-EU member states, can also affect trading patterns of geographical proximity.

Estonia, for example, which is a member of the EU, has two adjacent countries, Latvia to the south and Russia to the east. Russia is not part of the EU, but the fact that Latvia is, may imply that Estonia prefers to trade with Latvia, as these two countries are in the same situation as EU member states. If Estonia prefers to trade with Russia, it will result in considerably different conditions, as these two countries are in different situations (Mandjak, et al., 2011).

Transportation cost represents the geographic distance between two parts, irrespective of where they are located. Hence, these costs tend to increase with geographic distance (Huang, 2007). Countries that are adjacent to each other tend to trade more than countries that are distant, due to the transportation costs of long distances (Vanagas, 2013; Shenkar, 2001). Large geographic distance can also lead to increased transaction costs, in terms of transferring information and competence (Shenkar, 2001). In international trade, buyers have more information and knowledge about the national market and markets in nearby countries. Thus, information can provide huge barriers in international trade, as situations with lack of available information are not preferable. The difficulties of finding buyers in unfamiliar countries can also create an informational barrier. Countries that are adjacent often know more about each other, due to for instance direct interactions between the nationalities through tourism or business, and these countries are often familiar with each other's languages. It is empirically stated that countries that share a language or have colonial ties can be better able to overcome these barriers in international trade (Huang, 2007), and thus have a stronger trading pattern.

Unfamiliarity and uncertainty can also be obstacles of geographical distances (Huang, 2007). National aversion to uncertainty may be defined as "the collectively held attitude of a society toward uncertainty" (Huang, 2007: 166). It is claimed that countries are more resistant to trade with more distant countries, than the countries nearby, due to uncertainty aversion. Thus, countries with high level of aversion to uncertainty will be more resistant to trade distantly due to unfamiliarity. On the other hand, countries with low level of aversion to uncertainty are less resistant to international trade. In this sense, it is expected that countries with a high level of uncertainty aversion have stronger trading patterns with adjacent countries, than with distant countries. The Anglo, Germanic and Nordic countries are claimed to be

quite tolerant to uncertainty, whereas southern countries as Greece, Portugal, Spain, France, Belgium and Italy are less tolerant to uncertainty (Huang, 2007).

The western European countries are seen as a geographical unity, even though each country has various level of aversion to uncertainty. However, the tolerant western countries are claimed to prove that countries with tolerance to uncertainty trade more with distant partners. These countries are also approximately equally developed, and according to the geography, these countries face similar trade opportunities. The western European countries are seen as geographically open countries, and by combining the national acceptance of uncertainty with geography it was found that these countries achieve high actual openness. However, the countries in the south of Europe, that have higher level of aversion to uncertainty, did not achieve as high actual openness. This indicates that countries with high aversion to uncertainty do not take as much advantage of their beneficial geographical location as they can. If these countries had been more tolerant to uncertainty they could have traded more with the other large adjacent countries. Thus, countries with high level of aversion to uncertainty avoid international trade, even though these countries may have beneficial geographical locations (Huang, 2007).

It is stated that for countries of high aversion to uncertainty, it would be beneficial for government to promote export activities, and to enhance the interaction of distant countries that may perceive each other as unfamiliar through communication. This may be beneficial in order to reduce the negative impacts of being a country that is averse to uncertainty (Huang, 2007). According to this, TED can be seen as a useful tool, as it provides opportunities for all countries on an equal basis, thus promoting information and communication.

2.4 Theoretical summary

This chapter of theory has assessed the EU and the single market, and the important role of public procurement in the single market. The allocation process of public procurement and related legislation has been examined, and research of advantages and disadvantages of this system have been presented. According to Martin, et al. (1997) and Fee and McIlroy (1998), discriminatory behaviour towards international

suppliers exists, which is seen as a major obstacle for the completion of the single market. Carter, et al. (2010) also claim that the legislation is not practiced properly, which implies that contracting authorities actually chooses suppliers based on the suppliers' location. Pursuant to this, theories of national and international trade patterns have been assessed, where the latter includes patterns of cultural distance and geographical proximity. These methods presents research and theories on why buyers, as contracting authorities, may award contracts to suppliers in countries that are of similar culture, or suppliers in countries that contracting authorities share national border with.

Figure 2.3 illustrates the connection between the different aspects in the theoretical foundation. The main focus of this thesis is specifically limited to the EU and public procurement, and factors of cultural distance and geographical proximity. Other variables that could be of influence to trade are therefore excluded from figure 2.2.

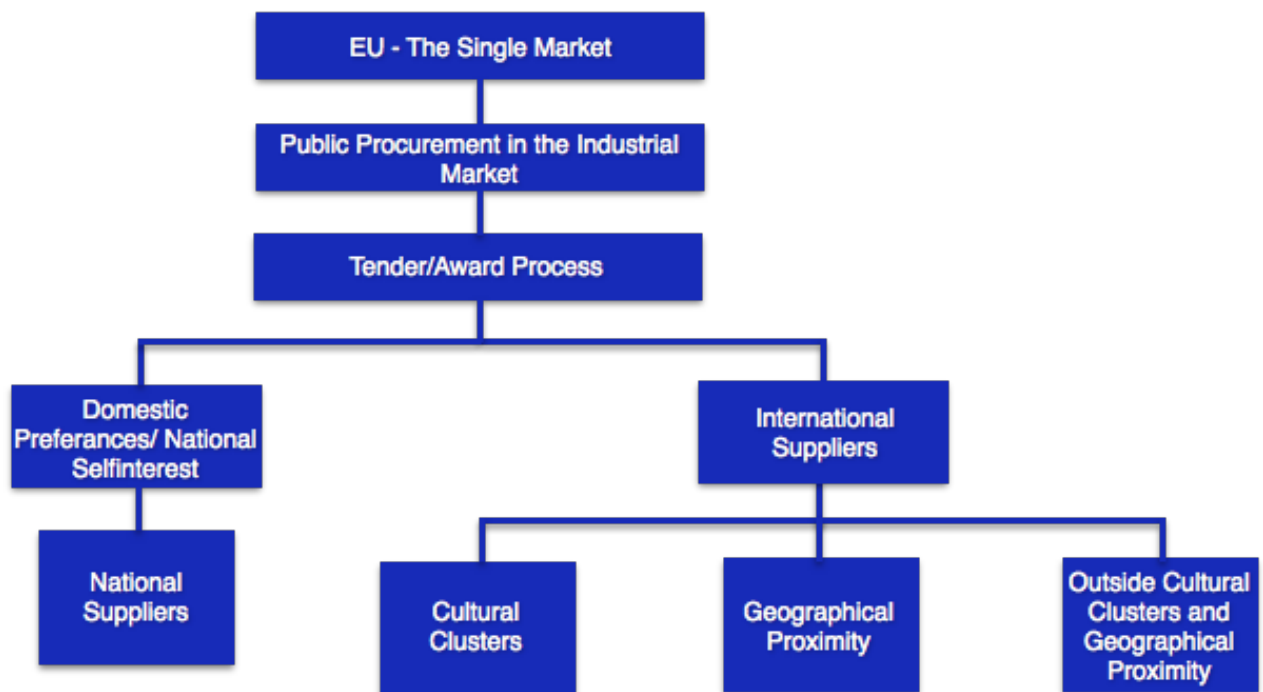


Figure 2.3 Research model

The upper squares in figure 2.3 illustrate the EU and the single market, and public procurement in the industrial market. Public procurement contracts are allocated through a tender process, which is represented by the square of Tender/Award process. The next squares in figure 2.3 shows the case of contracts being awarded to

national or international suppliers, which refers to patterns of domestic preferences in terms of contracts awarded nationally, and cultural distance, geographical proximity in terms of contracts awarded internationally. The last square represents the contracts awarded to countries outside the cultural clusters and geographical proximity.

3. Methodology

In order to provide answers about the extent that contracting authorities choice of supplier is connected to geographical location, the best suited methodological approaches have been emphasized. This chapter will present the methodological choices of this paper, which will be illuminated through selected approaches. First, the philosophical positions, as ontology and epistemology, will be described. Then the data collection with the use of secondary data and samples will be clarified, followed by explanations and assumption about the analysis and geography. Last, the reliability and validity of this study will be presented and discussed.

3.1 Philosophical position

Methodological choices in research projects are often based on philosophical assumptions that can contribute to the quality and creativity, of both the paper and the researcher. The basis is ontology, which extends to epistemology, which further fosters methodology and results in methods and techniques applied in the research (Easterby-Smith, et al., 2012).

Ontology is the underlying thoughts and meanings about how the reality is built up. Ontology can be divided into two contradictions, realism and relativism, where both possess subcategories (Easterby-Smith, et al., 2012). This master thesis supports realism, and a cross between the realistic and internal realistic perspective is applied. Hence, the basic assumptions are that the world is seen as concrete, and science can be enhanced via studies that are consistent with the phenomenon that is explored. According to realism believed that there is a single truth, and facts about it exists, which makes it possible to reveal the truth. At the same time, according to internal realism, the truth may be unclear and the facts may not be directly available (Easterby-Smith, et al., 2012). As for this study, it is assumed that findings are relatively concrete as the contracts for public procurement are either awarded to national or international suppliers, and the results can be revealed through the TED database. However, the contracts may not be as available and evident as wanted, and the results may therefore not be directly assessed, as aspects that are less concrete affect selection of suppliers.

Epistemology concerns various ways to examine the nature of the different aspects of the world. Epistemology also consists of two visions on how to carry out a research, which are positivism and social constructionism. Positivism is based on that the social world is outside and the characteristics of the world can be computed with objective methods, whereas social constructionism concerns subjective methods, as feelings and reflections. Positivism supports that real knowledge is evolved from explored facts, which can indicate behaviour of the people and the society. Social constructionism assumes that reality is constructed by social factors and influenced by people, rather than that the world is seen as exterior. Social constructionism examines different peoples knowledge and experiences, whereas positivism looks at external conditions and basic legislation (Easterby-Smith, et al., 2012).

As the analysis will take an objective form based on observed facts, and does not include personal or partial aspects, this study falls within positivism, or more particularly, within a cross of strong positivism and positivism. In this sense, reality is observed via TED, and the results will be related to external conditions. The analysis has its foundation on the numbers and facts revealed from the contract awards, and inferences will be drawn from these. Thus, it is assumed that the contract awards will provide answers for the trading patterns of public procurement within EU. This supports the positivistic aspect that knowledge can progress from the findings of the analysis. With positivism, this study achieves a different angle than the majority of industrial research, as the most common ontology and epistemology is realism and anti positivism (McCabe, et al., 2013)

When linking ontology and epistemology this study is intersecting with realism and strong positivism, and internal realism and positivism. In these terms, this study will assess the propositions that have been explained theoretically. It is based on multiple cases of contracts, with the aim of finding connections and patterns that emerges from the contracts. As this study wants to discover and exposure, the outcomes will also be a mix of verifying theories or enhancing them, in terms of public procurement.

3.2 Research design

Quantitative studies mainly depend on data and analysis that are numerical. This study is quantitative as it is based on 2621 contract awards that will be analysed and distributed into numerical tables and diagrams. A quantitative approach differs from the norm of qualitative studies within industrial marketing. In terms of the increasing debate about the constraints of using interviews as a source of information and data (Piekkari, et al., 2010), the benefits of a quantitative approach, rather than a qualitative, is that it is based on more concrete information, due to that interviews are avoided.

When the purpose is to create a picture of an event or a phenomenon that occurs, descriptive studies are well suited. A descriptive study wants to examine a situation, or how cases are related to each other in a situation (Gray, 2009). As the purpose of this study is to find today's patterns of trade within the EU, through examination of public procurement and TED, a descriptive and partly exploratory approach is seen as most suitable. The descriptive part seeks to describe the basics of public procurement and theories of trade. Further, the study attempts to locate patterns of trade, and thus takes an exploratory approach, where the patterns that occur will be described. A weakness in descriptive studies is that they are not suited to explain why a situation occurs (Gray, 2009). However, as the theoretical chapter has reviewed theories of trade, these will be applied to provide discussions of possible reasons for the trading patterns that may occur.

This research is directed towards reaching practical and theoretical understanding about trade related to public procurement in the EU. The empirical data will be collected and related to the theoretical basis from the previous chapters, which together provides a foundation for inferences and conclusion. The research material used is mostly from newer research papers, in order to apply the most current theory and information that exist. Other books and reference works are also used to get deeper knowledge and reinforce the information from research papers. When tables or figures are adapted from the literature, the reference will be stated in the text. Tables and figures with no reference are customized creations for this specific study.

3.2.1 Secondary data

Secondary data is archival sources of data, usually collected by other people. Archival secondary data is often gathered and presented in a particular design, due to the original purpose. Therefore, it is important to assess the purpose of why the data was originally collected, and compare them to the objective of the secondary use, in order to consider if the archival database is well suited for the study (Easterby-Smith, et al., 2012). Research within industrial marketing has argued that archival sources are rarely used. However, it is also stated that valuable “archaeology” of networks within businesses can be found through such sources (Piekkari, et al., 2010).

This research is based on the public database TED, which in this paper, is seen as an archival secondary database. The purpose of the data at TED is to share business opportunities, with the aim of EU’s single market (for detailed explanation of the purpose of TED, see section 2.2.2). This means that the data is not “collected” for a specific study, as it is based on real contracts between countries. Due to the legal requirement of publishing the contract award, and to state information of the supplier on the contract, it is possible to interpret the secondary data in terms of the study objective of this paper. Thus, the TED database is considered well suited for this study. The data that TED provides is, according to the usage of this paper, seen as macro data. Curran and Zignago (2011) claim that macro data can offer valuable insights in many areas. It is therefore chosen to take advantage of TED, in order to obtain insight in public procurement trade.

The choice of secondary data allows collecting larger volumes of data, which represents a high level of quality. There is also a risk due to that the data is collected by someone else, which can influence the quality of the research (Myklebost, 2012). However, as the secondary data in this paper are issued from the Journal of the European Union, the risk will decrease as it is collected from a legitimate source.

3.2.2 Data collection

The population is the number of entities that relates to the study, whereas a sample is a subgroup of the population. The aim is to draw an inference about the population, from the sample. Using a sampling approach is usually beneficial, but the difficulty is

to get a valid sample, i.e. one that corresponds to the population. An invalid sample will result in deceptive calculations, which is of no use. However, a valid sample can result in valuable data and answers. When decisions about the sample are made, it is important to keep the principles of representativeness and precision in mind, as these are determinants of the sample's quality (Easterby-Smith, et al., 2012). In the following, the choices of samples in this paper, in terms of representativeness and precision, will be presented.

In order to achieve a thorough analysis that allows inferences about the trade of each country, it is decided that all countries in the EU have to be included. As all countries in the world have access to TED, there is a possibility that any nationality could be awarded a contract from the EU.

From the archival edition of TED, all contract awards by the EU countries within the last five years are available. This represents 39 545 contract awards within the utilities sector (Tenders Electronic Daily, 2014), which denotes the population in this study. Including the archive is necessary as it provides the opportunity to examine the same number of contract awards from each country, which will give a better comparison than if the number was unevenly distributed from each country.

There are currently about 195 independent nation states in the world (One World Nations Online, 2014). A sample of 100 contract awards from each country is seen as an adequate sample based on the variation in possible countries that may be awarded a contract. A sample of fewer contract awards from each country will give inferences that are more uncertain, as there are many countries that may be awarded a contract. For example, a sample of 20 contracts from each country will provide difficulties in finding patterns for each country, as 20 would be too few to see the great variations of potential countries for the contract. A sample of 100 from each country is seen as a quite large sample, but this size is perceived as needed in order to present conclusions for each country, and the EU as a whole, with some confidence. Hence, 100 contract awards provide good precision to the sample, which in turn raises the credibility.

The data used in this study will be collected by the use of quota sampling. Quota sampling splits up the population in various sections that may be for example gender or country of origin, and then selects entities until the set quota is achieved for each section. The objective is that each section is filled in terms of the quota (Easterby-Smith, et al., 2012). In this study, quota sampling is suitable since it allows the user to divide the population into 28 sections, one for each EU country. This is beneficial, as the analysis not will be characterized by overweight of contracts from the largest countries, or underweight from the smaller countries. In addition, as the contract awards at TED are placed in reversed chronological order by date, quota sampling is seen as the most suited method for this study. Thus, the chosen sampling strategy supports the purpose of examining the most recent contract awards.

Quota sampling is a non-probability design, as the sample is a chosen quota and not randomly selected from the population. Hence, it is claimed that the level of confidence will be weak with this design (Easterby-Smith, et al., 2012). However, if a strategy of random sampling were chosen, the examination would not provide the most recent picture of trade. As the contract awards from the utilities sector at TED comes from different industries activities in the utilities sector that are not coordinated, the odds that two relatively similar contract awards comes right after each other, is small. This means that from the recent 100 contract awards from each country, a random selection of industries is most likely to be included in the sample, due to the order of date. As each country also has an unevenly distributed amount of contract awards, quota sampling is seen as the most beneficial method, as all countries will have an equal basis of 100 contract awards.

Representativeness of the sample refers to that the properties of the sample are mostly the same as those of the population (Easterby-Smith, et al., 2012). Thus, even though the sample is selected by date, it will include random awarded countries and random industries from the utilities sector, which corresponds to a certain degree of representativeness.

The database allows the user to separately see the contract awards published from one country, as well as allowing the user to access contract awards issued within the

utilities sector. The database will then display all contracts awarded from the specific country in reversed chronological order, i.e. from the most recent awarded contracts, to the contracts awarded in the past five years. Further, quota sampling will be used to examine the quota of 100 contract awards from each country, starting from the most recent and go backward until the quota of 100 is achieved. The number of contract awards issued from each country varies, due to, among others, the size and industry level of the specific country. Thus, the sample of 100 contract awards will represent various years of publication for each country. For some countries, contract awards from 2014-2013 will be examined, and in other smaller or less active countries, the examination will address contract awards from 2014-2010. This may provide a weakness because the compared contract awards are from different annual figures. However, it is argued that it is impossible to distinguish between past and present situations since the past is applied in structures that form present choices (Piekkari, et al., 2010). This study supports the latter as it is assumed that previous annual figures will describe the past, but also reflect today's patterns of trade.

With the objective of finding the level of international trade today, the 100 most recent contract awards from each country will be examined. For each country, the nationality of the supplier will be typed in an excel sheet. This will be repeated until the quota of 100 is collected from each of the 28 countries.

The gathered information from the contract awards will be inserted in a comprehensive cross table, that will show the country of the contracting authorities vertically, and the country of the suppliers horizontally. Through this cross table it will be possible to see the number of contracts that are awarded to national and international suppliers, which country the international contracts are awarded too, and the number of contracts each country received. The cross table will be seen as the foundation of the analysis, as the further analyses of the data will be drawn from it.

In line with the theory, the analysed data will be presented to reflect contracts awarded to national and international suppliers according to cultural clusters and geographical proximity. First, the data will be sorted in national, international and not applicable for each country, to assess the level of national-self interest. Then, the

analysis will be taken further, as the international contracts from each country will be examined, in order to present the numbers of contracts that are awarded within the cultural cluster of the contracting authorities. Last, the data will be presented in terms the geographical proximity of contracting authorities. Easterby-Smith, et al. (2012) claims that percentage change is more informative than the numeric change. Thus, this study will apply percentage illustrations to provide an informative understanding. Bar graphs are used in the discussion in order to clearly illustrate the differences. In the same manner, the countries in each bar graph will be arranged in an order relative to the phenomenon that will be discussed. Every bar graph will refer to a corresponding table in the appendix that provides the specific numbers or proportions discussed. In addition, all appendices has its number and name aligned to the right, in order to make the browsing and lookup easier.

3.4 Data analysis

This analysis has examined 2621 contract awards issued from the EU, which includes 28 countries in Europe (see appendix 2, “Cross table”). 100 contract awards from each contract were chosen, in terms of the quota sampling method. Four countries had less than 100 contracts published in TED. These were Malta (30), Luxembourg (54), Cyprus (76) and Croatia (61), however, in percentage, these amounts are considered as 100% of the selected sample. These countries have been retained in the analysis, as the aim of this master thesis is to draw inferences based on trade within all the countries in the EU. As this study is based on percentage figures, these four countries will have the same influence on the analysis as the other countries with 100 contract awards. It is also worth to note that the analysed contract awards from these four countries represents the whole population, thus the outcomes from these four countries provide a high level of representativeness.

Out of the analysed contracts from each country, there were contracts that had lack of information on the nationality of the suppliers. These contract awards are excluded from the further analysis, as there was no valid information useful for the analysis of national or international contracts. However, they may say something about a country’s level of transparency.

In total 2621 contract awards were examined, of which 266 (10,1%) are classified as “not applicable”, due to missing information. These findings suggest that 10,1% of the contract awards lack transparency. Table 3.1 provide an overview from each country of the proportion of contract awards that are not applicable.

Contracting Authorities	Number of Contracts that are Not Applicable	Contracts that are Not Applicable (%)
CY	24	31,6 %
FR	29	29,0 %
DE	25	25,0 %
PT	20	20,0 %
AT	17	17,0 %
FI	16	16,0 %
SE	16	16,0 %
ES	14	14,0 %
DK	13	13,0 %
LU	7	13,0 %
IE	12	12,0 %
NL	12	12,0 %
UK	12	12,0 %
BE	11	11,0 %
HU	11	11,0 %
CZ	8	8,0 %
MT	2	6,7 %
IT	6	6,0 %
GR	5	5,0 %
RO	3	3,0 %
LT	1	1,0 %
PL	1	1,0 %
SK	1	1,0 %
BG	0	0,0 %
EE	0	0,0 %
HR	0	0,0 %
LV	0	0,0 %
SI	0	0,0 %

Table 3.1 Contract awards classified as not applicable

Table 3.1 illustrates that the proportions of contracts that are not applicable varies from one country to another. Cyprus, France and Germany had the largest proportions of contracts with lack of information. Bulgaria, Estonia, Croatia, Latvia and Slovenia had no lack of information on the suppliers (i.e. no contract awards which were not applicable), which may imply that these countries have the highest degree of transparency in this analysis. Most of the “not applicable” contract awards did not have any information on the winner at all, which weakens the transparency. However, the reason for the absence of this information may be due to confidential or sensitive information, where it in these circumstances, according to Bovis (2012), is “allowed” to not include this information.

Hereafter, this study will emphasize the remaining 2355 (89,9%) contract awards that provide the required information for the further analysis. This means that the sample of 2355 (89,9%) is hereafter considered as the foundation for the analysis and referred to as 100%.

3.4.1 Geographical choices

This study adapts Ronen and Shenkar (2013) concept of cultural clusters. However, as Ronen and Shenkar (2013) did not include every country in the EU, their cultural map has been adapted in this master thesis. Countries outside the EU have been excluded from the clusters. For simplicity, the names of the clusters are also adapted, excluding “Europe” in the names. Table 3.2 shows the adapted version of Ronen and Shenkar’s (2013) clusters that this paper will apply.

Anglo	East	Germanic	Latin	Nordic
IE (Ireland)	BG (Bulgaria)	AT (Austria)	BE (Belgium)	DK (Denmark)
UK (United Kingdom)	CY (Cyprus)	DE (Germany)	ES (Spain)	FI (Finland)
	CZ (Czech Republic)	LU (Luxembourg)	FR (France)	NL (Netherlands)
	EE (Estonia)		IT (Italy)	SE (Sweden)
	GR (Greece)		MT (Malta)	
	HR (Croatia)		PT (Portugal)	
	HU (Hungary)			
	LT (Lithuania)			
	LV (Latvia)			
	PL (Poland)			
	RO (Romania)			
	SI (Slovenia)			
	SK (Slovakia)			

Table 3.2 Cultural clusters, adapted from Ronen and Shenkar (2013)

Table 3.2 shows the adaptation choices of Ronen and Shenkar's (2013) cultural clusters. Malta and Luxembourg are two countries that were not included in Ronen and Shenkar's (2013) version, so these countries have been placed in the most suitable cluster, according to geography. Malta is included in the Latin cluster, as it is assumed that Malta has strong connections to Italy. Luxembourg is placed in the Germanic cluster, due to the assumption that this cluster is best suited for Luxembourg. Ronen and Shenkar (2013) placed Greece in the cluster of Near East. In this cluster it was only Greece that is of concern to this paper, thus it is chosen to move Greece to the East cluster.

Maritime borders are, in this paper, not considered as common borders between countries. However, Malta and Cyprus are exceptions, as they are countries that are geographically distant from the mainland. Italy is considered to share a border with Malta, because there is a geographically small distance between these two. Greece and Turkey are considered to share borders with Cyprus. However, as Turkey is not a

part of the EU, and hence does not concern this paper, Greece is therefore the “chosen” country with a common border to Cyprus. Another assumption is that Denmark and Sweden are considered to have a shared border, due to the Øresund Bridge⁵.

Additionally, a map of Europe and the EU countries is enclosed in appendix 3 “Map of Europe and the EU countries” to make it easier to follow the analysis.

3.5 Validity and reliability

As this master thesis is positivistic, it will follow the (strong) positivistic approach for validity and reliability. Reliability concerns if alternative explanations is eliminated, in order to assess if the same results will appear in other occasions (Easterby-Smith, et al., 2012). This is assured through detailed descriptions of the study, and in particular detailed description of the process of transferring the contract awards from TED to the analysis. Accuracy relative to the sample and the methods used for examination is seen as important aspects. The database TED is issued from the EU, and is thus expected to imply high level of reliability. Thus, as this study is based on data from TED, the analysis is expected to provide the equal level of reliability.

Validity refers to in what degree the findings represent an accurate depiction of the phenomenon that is examined. An essential question regarding validity is if the findings are equivalent to the reality, and especially if the methods used fosters sufficient precision and stability (Easterby-Smith, et al., 2012). The findings of this study will provide validity as the results are based on contract awards, which will entail the level of national and international trade among the EU countries. As the sample yields good precision in terms of its size, the findings of this study will be similar to the reality. Assumed that the used sample is representative, the findings actually reflect the reality, as the contract awards provide empirical industrial data. This implies that the possibilities of inaccurate results are reduced.

⁵ The Øresund Bridge is 7845 metres long, and connects Denmark and Sweden (Store Norske Leksikon, 2009).

Internal validity deals with elimination of other credible or probable explanations and the factors that may prevent the accurate explanation to emerge (Easterby-Smith, et al., 2012). This study is substantiated in empirical data, as the contract awards is the only public document that can be examined in order to find information on the awarded suppliers. The use of information on the suppliers from the contract awards provides results that primarily are connected to public procurement.

External validity concerns whether the trends from the sample will be equally observed in another era or context, which means that there is probability for reproduction of the results (Easterby-Smith, et al., 2012). If the findings of this study will be repeated in other sectors is impossible to say, as it in other settings will be different circumstances and conditions. If the findings of this study will be similar to equal research outside the EU is unlikely, as public procurement within the EU is covered by legislation that may be different in other countries or trading blocs. Studies like this master thesis, which is built on history and patterns will, according to Easterby-Smith, et al. (2012), “expire”, and thus have to be rewritten in the future. High level of external and internal validity enhances the credibility of the study (Myklebost, 2012).

4. Analysis and discussion

The purpose of this chapter is to address to what extent international awarded public procurement contracts are affected by cultural differences and geographical proximity, through the analysis of the contract awards at TED. At the end of this chapter, these aspects will be combined, in order to examine the patterns of public procurement trade in the EU. In accordance with the theory, the aspects of domestic preferences, cultural clusters and geographical proximity will be applied in the same order, followed by a presentation of the trade patterns.

4.1 Patterns of national and international trade

The initial step in this analysis provides findings on national and international contracts awarded by public entities in the 28 countries of the EU. Domestic contracts are the contracts that are awarded to domestic suppliers, whereas international contracts refer to contracts awarded to suppliers in another country than the contracting authority's country of origin. From the analysed contracts it was found that 89,1% of them were awarded to domestic suppliers, whereas 10,9% of the contracts were awarded to international suppliers. Figure 4.1 shows the distribution, where blue indicates domestic contracts and green indicates international contracts.

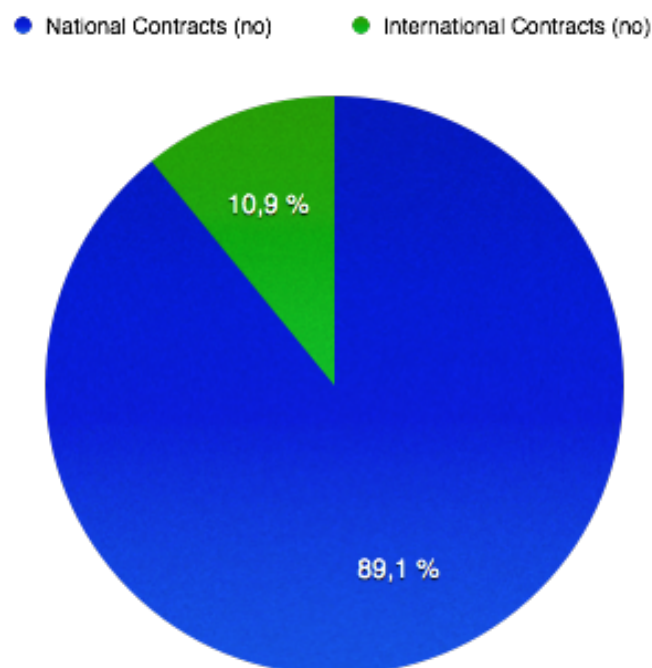


Figure 4.1 Contracts awarded to national and international suppliers

Figure 4.1 illustrates the general conclusion that there is significantly little international trade compared to domestic trade. Vanagas (2013) found that domestic trade within Europe was 7,5 times larger than international trade. In section 2.3.1 it was assumed that this analysis would result in lower degree of national trade, due to the industrial character of the market. However, this analysis shows domestic trade being 8,2 times higher than international trade. This is counter-intuitive, as the industrial market is, according to Chung, et al. (2012) and Nakip (1999) less sensitive to consumer preferences and should, in these terms, have a higher degree of international trade.

Looking further into each country's distribution, it is clear that there are large variations in the proportions of national and international contracts awarded from country to country. Figure 4.2 presents the share awarded from the 28 countries of the EU, where blue displays national contracts and green displays international contracts. For further insight on these proportions, see the corresponding table in appendix 4, "National and international contracts".

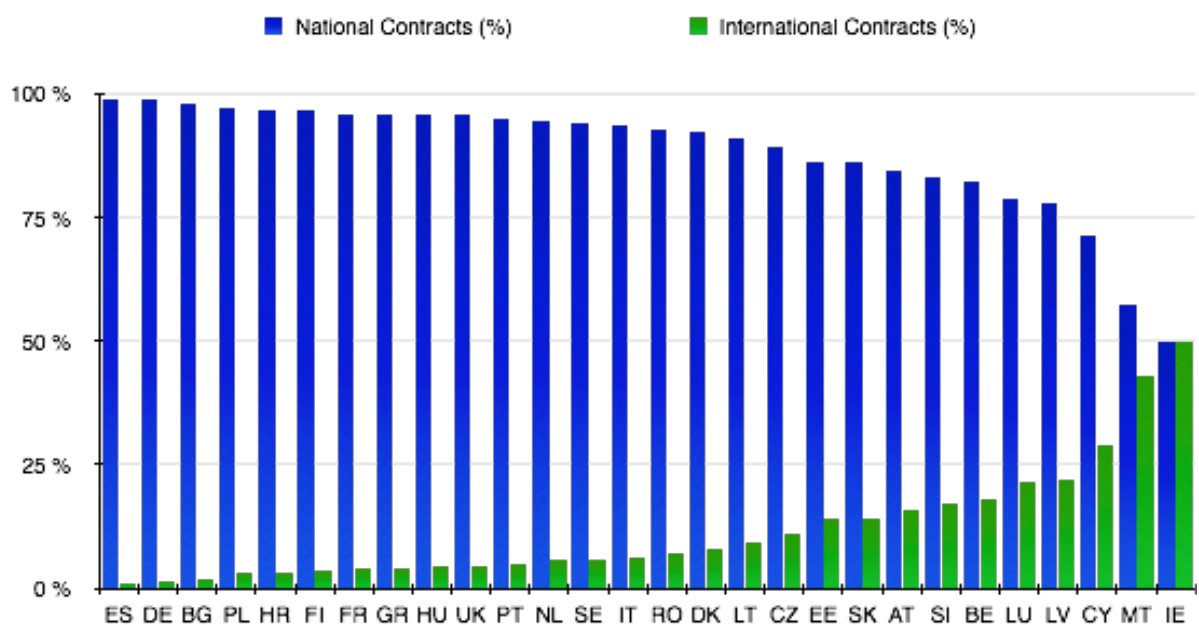


Figure 4.2 Proportion of national and international contracts from the EU countries

It can be seen from figure 4.2 that Spain is the country with the smallest proportions of international contracts with 1,2%, followed by Germany with 1,3%, Bulgaria with

2,0%, Poland with 3,0%, and Hungary and Croatia with 3,3%. On the other hand, Ireland has by far the highest score of international contracts, where 50% are awarded to suppliers of foreign origin. Malta has the second highest outcome, as 42,9% of the contracts are awarded internationally, followed by Cyprus as ranked as number 3, with 28,8% international contracts, Latvia with 22,0% and Luxembourg with 21,3%.

Due to the large proportion of national contract awards, the findings indicate that national self-interest is still a major obstacle to international trade within EU, and for the single market. This means that, according to Potts (2000), it is likely to assume that all the nations, except from Ireland, are more interested in enhancing their own economy through public procurement, rather than investing in other countries products or services. Thus, it can be presumed that the nations have more national than international mind-sets. According to the proportions, it can be assumed that the majority of the EU countries are affected by national self-interest. Thus, these findings suggest that there is a significant tendency among the EU countries to favour local or national suppliers, as the number of international contracts is limited.

This analysis shows border effects in 27 of the 28 countries in the EU, as the national trade constitutes a higher volume than the international trade. The only country that is not a part of this trend is Ireland, with 50% of the contracts awarded internationally. Regarding Chen's (2004) anticipation of integration of the EU countries, it was expected that the border effects would be small. However, Chen's (2004) theory is not supported by the results of this analysis.

The high level of nationally awarded contracts may be due to Burkert, et al. 's (2012) findings that international trading relationships are shown to be poorer than domestic relationships. Thus domestic suppliers are awarded more contracts than international suppliers, as the latter involves greater risk regarding contact, duration and perceived quality, than domestic relationships.

According to Potts (2000), an important aspect is the question of whether contracting authorities actually chooses the best product regardless of the suppliers' nationality. The results provide reason to believe that contracting authorities tend to choose suppliers based on their nationality, although the directives strive to eliminate such

discriminating behaviour (Martin, et al., 1997). The nationality of all the suppliers who may have submitted a tender cannot be seen in the source data, which makes it impossible to ascertain if contracting authorities have disregarded tenders from foreign countries. However, as the directives foster transparency and thus equal opportunities for all suppliers in the EU (Carayannis and Popescu, 2005; Gelderman, et al., 2006; Fee and McIlroy, 1998), and this analysis shows that 89,1% of the contracts are awarded to domestic suppliers, it may be reasonable to assume that the majority of the submitted tenders were from domestic suppliers. Regardless of the latter being the case or not, there is substantial evidence that domestic suppliers are awarded the largest share of the contracts, which supports the theories of Vanagas (2013), Turrini and Ypersele (2010), Potts (2000), Fee and McIlroy (1998) and Martin, et al. (1997). It is evident that foreign suppliers must be even more encouraged to submit tenders in other countries.

It is observed that there is no equal integration between the countries, and the competition is therefore not seen as optimal. In an optimal market, more international suppliers are included in order to foster the best practice and push the prices down (World Trade Organization, 2003; Martin, et al., 1997). This analysis indicates that, with a proportion of only 10,9% international contracts, the single market still needs to be enhanced. Eventually, this may result in even more decreased integration and decreased competition, as the proportion of international suppliers is small.

The analysis does not detail whether the contracts were awarded in terms of lowest price or based on economically most advantageous tender. Thus, a correlation between the overweight of national suppliers and award based on economically most advantageous tender with unquantifiable sub criteria will only be conjecture. However, due to the large proportion of domestic contracts, and the statement of Bergman and Lundberg (2013) that the criteria of economically most advantageous tender is used more often than lowest price, it may be assumed that economically most advantageous tender was used more often than lowest price in this analysis as well. Thus, it appears that the use of economically most advantageous tender may foster preferential behaviour, or at least that this criterion does not discourage such behaviour.

The type of procedure is not specified in the analysis either. However, it is conceivable that by using restricted or negotiated procedure it may be possible to preclude international suppliers from participating in the competition since the suppliers must be selected or invited by the contracting authorities if the suppliers meet certain requirements. It can be presumed that it may be more difficult for international suppliers to meet the requirements of the contracting authorities than domestic suppliers, since domestic suppliers have more information and knowledge about the contracting authorities' preferences and perceptions.

Martin, et al. (1997) found the number of domestic contracts to be 97,9%. In this study, it is found that 89,1% of the contracts were awarded to domestic suppliers, whereas 10,9% were awarded to international suppliers. However, even though the approach taken to these values in Martin, et al. 's (1997) study differs from this analysis, it appears that international trade in the EU has grown, as these findings suggest an increase of almost 10% the past two decades.

Further analysis and discussion in this thesis will be based on only the contracts that were awarded to international suppliers. The international contract awards will be analysed in terms of cultural clusters and geographical proximity, followed by an analysis of the international contracts awarded within the EU, Europe and outside Europe, and a discussion of the context.

4.2 Patterns of cultural distance

The international contracts were analysed based on Ronen and Shenkar's (2013) cultural map, which was adapted to fit the EU and this study. As Ronen and Shenkar (2013) uses cultural clusters to see how the countries group together, this paper has applied these groupings to see how or if trade is concentrated within the cultural clusters. Figure 4.3 shows the share of contracts that are awarded within the cultural clusters and outside. Blue indicates the proportion of trade within the cultural clusters, and green indicates the proportion of trade outside the cultural clusters.

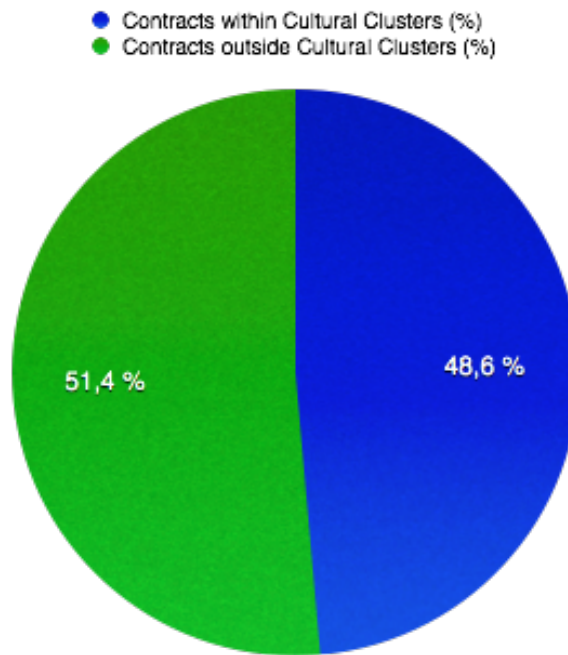


Figure 4.3 International contracts within cultural clusters and outside

From figure 4.3 it can be seen that trade from the EU countries to other EU countries within the same cultural cluster as the issuing country, represents 48,6% of all the international contracts. Contracts that are awarded to countries outside the issuing country's cluster represents 51,4%. For all the clusters in general, the findings suggest that there is no clear evidence that cultural distance is of influence in public procurement trade. These percentages indicate that cultural differences between the issuing countries and the awarded countries may not be seen as a major obstacle for trade of public procurement. However, different results will be revealed by examination of each cluster separately. Figure 4.4 provides an overview of each clusters proportion of trade to countries within the same cultural cluster. For the corresponding table on all the clusters, see appendix 6, "Contracts within and outside the clusters".

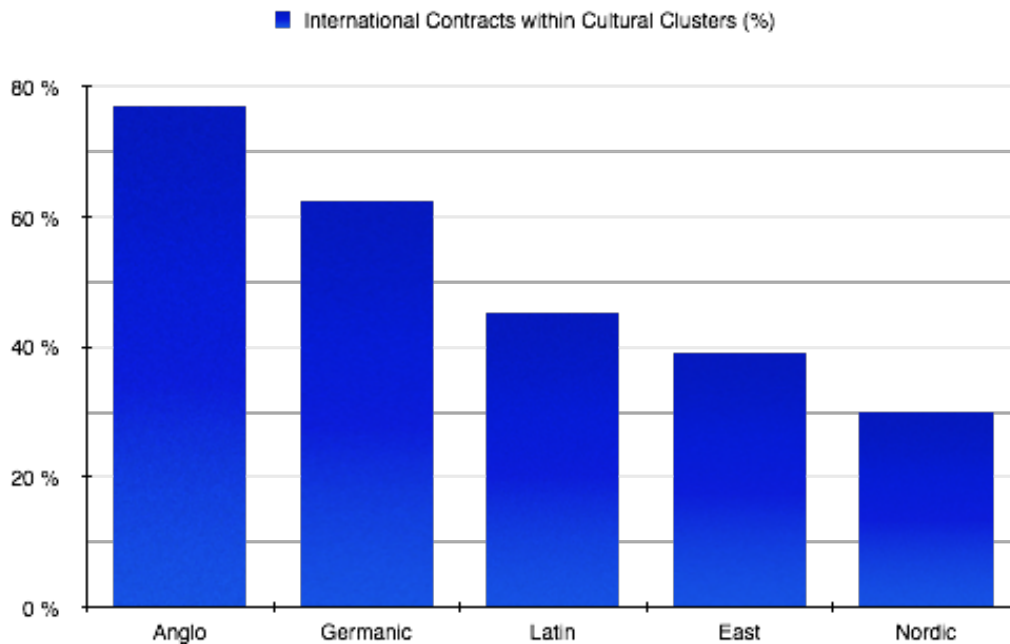


Figure 4.4 International contracts within the cultural clusters

This distribution shown in figure 4.4 illustrates various proportions of cluster trade for each cluster, ranging from 30,0% in the Nordic cluster to 77,1% in the Anglo cluster. The cluster of Germanic, Latin and East awarded respectively 62,5%, 45,2% and 39,0% of their contracts to countries within their clusters.

Trade within each cultural cluster and the countries within each cluster will be reviewed, starting with the Anglo cluster, as this cluster has the highest level of trade within the cluster. The examination of the Anglo cluster will be followed by an examination of the Germanic, Latin, East and Nordic clusters.

4.2.1 Patterns of trade in the Anglo cluster

The Anglo cluster is the smallest of the clusters discussed in this paper, as it consist of only two countries: the United Kingdom and Ireland. However, this cluster has the highest degree of international trade within the cluster with 77,1%. Figure 4.5 illustrates the proportion of international contracts awarded within the cluster in blue, whereas the proportion of international contracts awarded to countries outside the cultural cluster are shown in green.

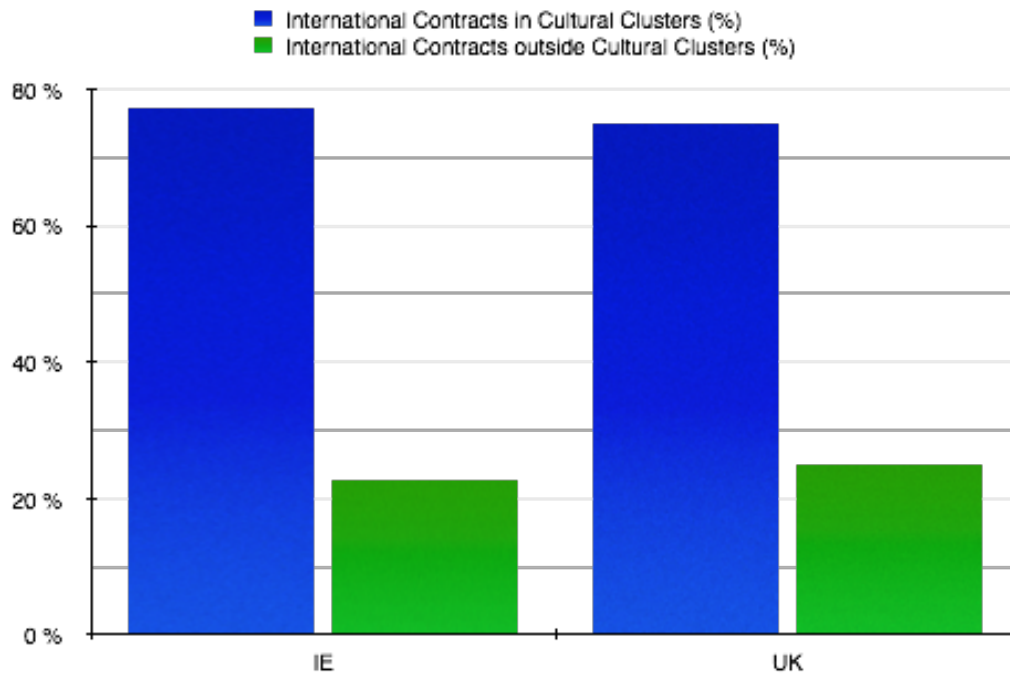


Figure 4.5 International contracts within and outside the Anglo cluster

Figure 4.5 illustrates that Ireland and United Kingdom have almost the same ratio of trade within the cultural cluster and outside the cluster. Ireland, compared to the United Kingdom, has a slightly larger proportion of contracts awarded within the Anglo cluster and a slightly smaller proportion of contracts awarded outside the cluster.

Ireland awarded 77,3% of their contracts within the cluster, where all of these are awarded to United Kingdom. On the other hand, United Kingdom awarded 75% of their contracts to the cluster, where all of these went to Ireland. This shows a major trading pattern in these two countries, and hence in this cluster, as both of these countries award nearly 80% of the contracts within the Anglo cluster. Regarding this papers adaptation of Ronen and Shenkar’s (2013) cultural map, it can be stated that there is a clear pattern within the Anglo cluster to trade with countries that have small cultural distance to them. It can also be assumed that the Anglo cluster, according to Shenkar (2001), is resistant to invest in countries that are culturally distant due to unfamiliarity and an associated higher risk. As seen from this, and the analysis of the national contracts, Ireland is the only country that supports Mueller’s (2011) statement that cultural distance is the factor of why the degree of trade in some market is similar to the degree of trade in domestic markets. As Ireland awards approximately

the same proportion to domestic suppliers as they award to other countries in the Anglo cluster, it can be assumed in accordance with Mueller (2011) that this is because the cultural distance between Ireland and United Kingdom is very small, and thus almost irrelevant. As language, geography and religion were the variables in Ronen and Shenkar's (2013) report, it can then be assumed that, for this cluster, similarities in these variables are a significant factor for trade.

According to Huang (2007) the Anglo countries are tolerant to uncertainty and the unknown, where Huang (2007) indicate that these countries should be able to trade more with distant and unknown countries. However, according to the findings here, the opposite is true. This suggests that, within public procurement, the Anglo cluster seem to prefer the certain and known, as the majority of their trade is within the cluster.

4.2.2 Patterns of trade in the Germanic cluster

The next cultural cluster examined is the Germanic, which consists of Austria, Germany and Luxembourg. Figure 4.6 visualizes the trade in this cluster, where blue indicates the proportion of international contracts awarded within the cluster, and green indicates the proportion of international contracts awarded to countries outside the Germanic cluster.

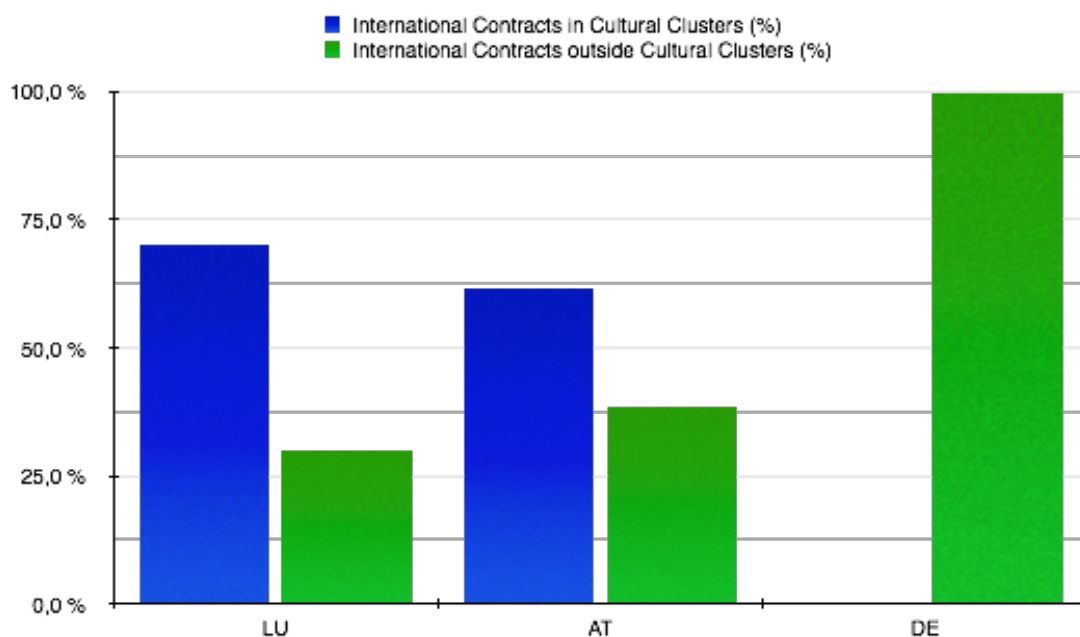


Figure 4.6 International contracts within and outside the Germanic cluster

Figure 4.6 illustrates that Austria and Luxembourg have approximately the same proportions of contract awarded within and outside the Germanic cluster. However, Germany stands out with zero contracts awarded within the cluster, whereas their whole proportion of international contracts are awarded outside the cultural cluster.

The Germanic cluster ranges second in intra-cluster trade, as these countries trade 62,5% within the cluster. Luxembourg is the country with the greatest proportion of contracts awarded within the Germanic cluster, with 70%. Of these were 60% awarded to Germany, and 10% to Austria. On the other hand, Austria awarded 61,5% of their contracts within the cluster, where all of these are awarded to Germany. Germany is the only country in this cluster where none of the contracts were awarded to the cluster, which shows fluctuations for the countries. However, as these countries are in the same cultural cluster and that they award 62,5% of their international contracts to each other, this indicates that cultural similarities may be meaningful when contracts are awarded, at least for Luxembourg and Austria. In the same manner as the Anglo cluster, it can in terms of the Germanic cluster, be assumed that Ronen and Shenkar's (2013) variables of religion, language and geography, are of importance when the Germanic cluster trades. The exception is Germany, as it may seem that contracting authorities in Germany are less concerned about cultural distances to their trading partners. However, suppliers in Germany received the highest amount of contracts from the other countries within the Germanic cluster. This shows that Germany is an attractive country, due to their high technology level of goods and services, which supports Curran and Zignago's (2012) findings that countries with high technology standards have a higher degree of international trade.

Huang (2007) claim that the Germanic cluster is less tolerant to the unknown, and thus less open to trade with markets that are culturally different. These results indicate that Germany, as an awarding country, does not support Huang's (2007) statement, as all of their international contracts are awarded to different markets with different cultures than the Germanic culture. However, in terms of Austria and Luxembourg, which also are less tolerant to unknown cultures, the findings suggest that, regarding public procurement, these countries prefer to trade with cultures that are similar to them, but they also trade to a lesser extent with cultures that are dissimilar. In this sense, Austria and Luxembourg supports Huang (2007).

4.2.3 Patterns of trade in the Latin cluster

The Latin cultural cluster includes Belgium, Spain, France, Italy, Malta and Portugal. The trade within and outside the cluster is presented in figure 4.7, where trade within the Latin cultural cluster is shown in blue, and trade outside the cultural cluster is shown in green.

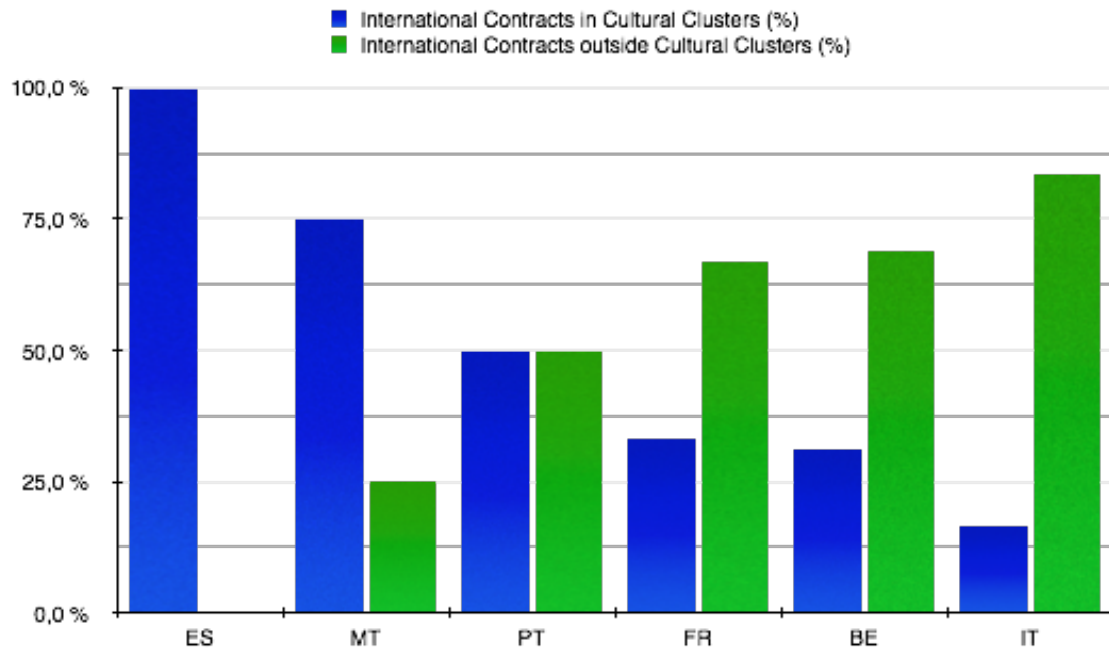


Figure 4.7 International contracts within and outside Latin cluster

As illustrated in figure 4.7, five of the six countries trade both within and outside the cultural cluster, and the distribution varies for each country. Spain is the only country within the Latin cluster where all of their international contracts are awarded within the same cluster.

Together, the Latin cluster awarded 45,2% of the international contracts within the cluster, thus this cluster ranks third of all the clusters. The country with the highest level of trade within the Latin cluster is Spain with 100% of their contracts awarded to countries within the cluster, where Italy is the awarded country of the whole proportion. Malta awarded 75% of their contracts to other countries of the Latin cluster, where 50% went to Italy, 16,67% to France and 8,33% to Belgium. Portugal awarded 50% of the contracts within the cluster, where all of these were awarded to Spain. The country with the fourth highest level of contracts within the Latin cluster is France with 33,3%, where the whole proportion was awarded to Italy. Belgium

awarded 31,3% of their contracts within the cluster, where 12,5% of these are equally distributed each to Spain and France, and 6,3% were awarded to Italy. Italy awarded 16,7% of their contracts within the cluster, where Spain received the whole proportion.

This shows that Spain and Italy take advantage of each other, where they are each other's largest trading partners within the Latin cluster. Spain, France and Italy appear to be the foundation in this region, where Portugal gives input to Spain, and Malta gives inputs to Italy and France, while Belgium supplies Spain, Italy and France. Thus, this cluster is rather concentrated in terms of trade, where all the countries of the cluster are included. Due to the level of concentration, it can be assumed that Ronen and Shenkar's (2013) cultural similarity is of some importance when the Latin cluster trades. At the same time, their level of 45,2% trade within the cluster implies that this cluster is less sensitive to cultural differences, as the majority of this clusters international contracts are awarded outside the cluster. For Spain, Malta and Portugal cultural similarity is shown to be of higher importance than for the remaining countries in the Latin cluster.

Huang (2007) claim that the countries in the Latin cluster are less tolerant to unknown cultures. These findings indicate that the majority of international contracts are awarded outside the cultural Latin cluster. Thus for the Latin cluster in general, Huang (2007) statement is not fully supported, as the Latin cluster trades more with different cultures than similar cultures. However, when examining each country of the cluster it is found that Spain and Malta support Huang (2007) as it seems like they prefer to trade within the cluster whereas Italy, Belgium and France do not support Huang (2007). Portugal awarded equal proportions of international contracts within and outside the Latin cluster, which indicate that Portugal are indifferent to the statement of Huang (2007).

4.2.4 Patterns of trade in the East cluster

The East cluster consists of Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Croatia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia and Slovakia, and is the cluster with the largest number of countries. Figure 4.8 presents the international

trade within the cultural cluster of East, as well as the international trade outside the cluster. Blue indicates trade within the cultural cluster, whereas green indicates trade with countries outside the cultural cluster.

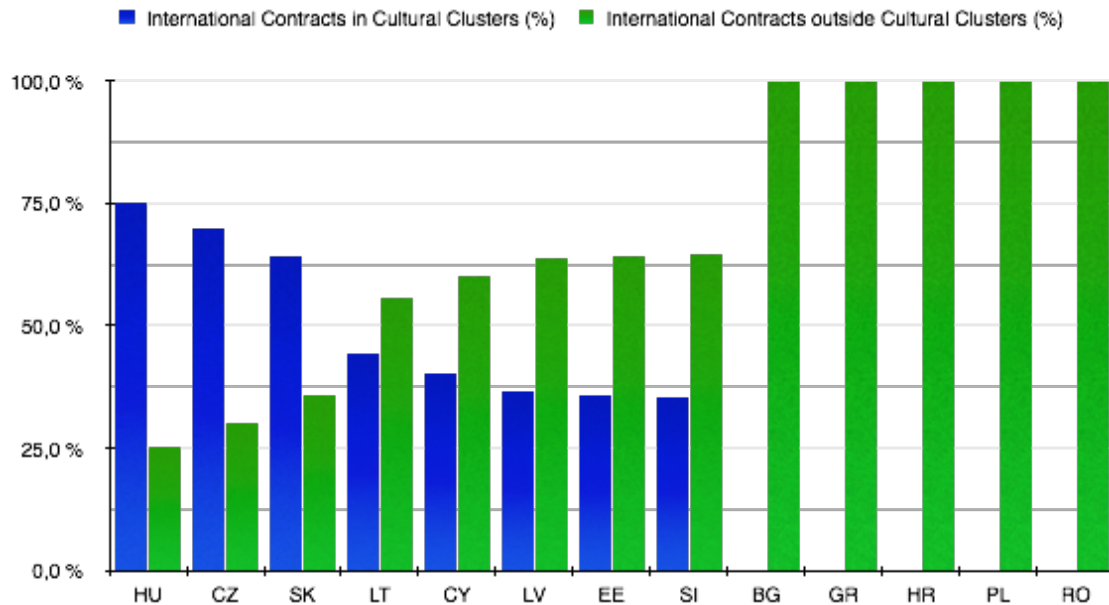


Figure 4.8 International contracts within and outside the East cluster

Figure 4.8 illustrates that eight countries of the East cluster awarded international contracts to countries within the cultural cluster, and the proportion of contracts within the cluster varies from Hungary's 75% to Slovenia's 35,3%. Five of the 13 countries of the East cluster did not award any of their international contracts to countries in the East cultural cluster.

The East cluster ranks fourth in cluster trade with a percentage of 39,0% of international contracts awarded within the cluster. Hungary awarded 75% of their contracts within the cluster, which represents the highest degree of international contracts awarded within this cluster. This amount is equally distributed to Czech Republic, Croatia and Poland. Czech Republic awarded 70% of their contracts to countries in the same region. 60% was awarded to Poland, and 10% was awarded to Slovakia. The third is Slovakia with 64,3%, where all of these contracts were awarded to Czech Republic, which reveals that there is a trading pattern between Slovakia and Czech Republic, and that Slovakia's trade is in large degree based on Czech Republic. Lithuania is the country with the fourth highest outcome, with 44,4% of the contracts

awarded within the cluster of East Europe. All of these contracts were awarded to Latvia, which shows that, within the cluster, Latvia is a major trading partner for Lithuania. Cyprus awarded 40,0% of their contracts within the cluster, where in fact all of these were awarded to Greece. Then there is Latvia, with 36,4% contracts within the East cluster, where Poland received 13,6%, Czech Republic and Estonia received 9,15% each, and Lithuania received 4,5%. Estonia awarded 35,7% of their international contracts within the cluster. Poland was awarded 21,4% of these contracts, and the remainder were equally awarded to Latvia, Lithuania and Czech Republic. Lastly, Slovenia awarded 35,3% of their contracts within the cluster, where 23,5% of these went to Croatia and 11,8% to Czech Republic. These proportions indicate that Czech Republic is a major supplier for almost all the countries in the East cluster.

Romania, Poland, Croatia, Greece and Bulgaria did not award any contracts within the cluster. However, it is worth to note that all of these countries have awarded contracts to international suppliers outside the East cluster. This implies that cultural distance is of small importance when these five countries award contracts. However, for Hungary, Czech Republic and Croatia, cultural similarities are assumed to be of high relevance for public procurement trade, due to their high level of trade within the cluster. This reveals differences of how the countries in the cluster see cultural distance, which makes it hard to infer the importance of cultural distance for the East cluster as a unit. Thus, according to Shenkar (2001), this cluster provides results that, even though they are culturally similar, their “assumptions” of cultural distance are very different.

4.2.5 Patterns of trade in the Nordic cluster

Denmark, Finland, the Netherlands and Sweden represent the Nordic cultural cluster. The trade of this cluster is visualized in figure 4.9, where blue indicates the share of international contracts awarded within the cultural cluster, and green shows the share of international contracts awarded outside the cultural cluster.

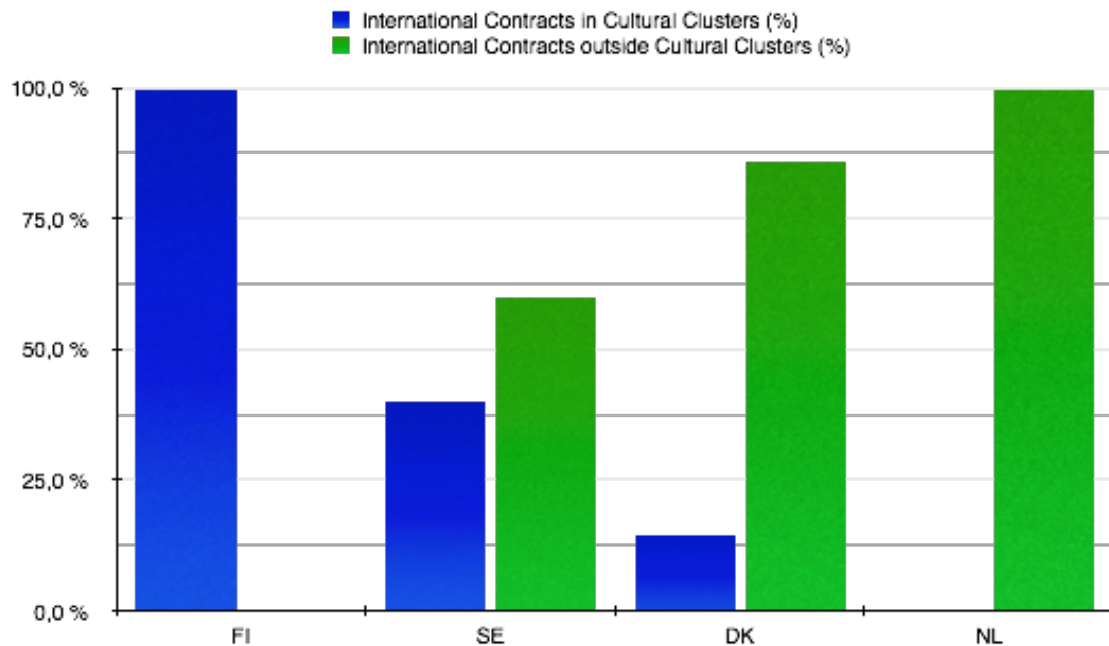


Figure 4.9 International contracts within the Nordic cluster

Figure 4.9 shows that Finland awarded all of their international contracts within the Nordic cluster, whereas the Netherlands did not award any contracts to countries of this cluster. Both Denmark and Sweden have awarded contracts within and outside the Nordic cultural cluster, but predominantly outside the cluster.

Together, the Nordic cluster has the lowest outcome of trade within the cluster, with only 30,0% of the international contracts awarded to other countries in the cluster. As seen from the figure, Finland is the country in this cluster with the highest degree of cluster trade. Finland awarded 100% of their contracts within the Nordic cluster, and all of these went to Sweden. From this, it can be assumed that Sweden is the greatest supplier within public procurement for Finland. Sweden is the country with the second highest level of trade within the cluster, as 40,0% of their international contracts was awarded to the cluster, where all of these went to the Netherlands. Denmark awarded 14,3% of the contracts within the cluster, where the whole proportion went to Sweden. With this it is apparent that Sweden is the core country in the Nordic cluster. The Netherlands did not award any of their contracts to countries within the cluster, which assumes that cultural similarities in trading partners is not an important factor for the Netherlands. However, especially for Finland, and to some extent for Sweden, cultural similarities is of importance when these two countries

choose trading partners. The cluster in general does not support the statements of Shenkar (2001) regarding resistance to invest in culturally distant markets, as the majority of the international contracts from this cluster are awarded to markets that are culturally difference from the Nordic cluster.

Regarding tolerance to unknown cultures, Huang (2007) argues that the Nordic countries are more tolerant, which may indicate that these countries are likely to trade with countries with other cultures, i.e. countries outside the Nordic cluster. The findings of the cluster as a whole indicate that the Nordic cluster is tolerant to other cultures, which supports Huang (2007), as the Nordic cluster awards 70% of their international contracts outside the cluster. However, as Finland awards all of their international contracts within the cluster, Finland indicate that they to some extent are less tolerant to the unknown, which does not support Huang (2007). The other countries award the majority of their international contracts to countries outside the cluster, which means that these countries also separately still support Huang (2007).

4.2.6 Discussion of the patterns in the cultural clusters

As cultural distance was used earlier to assess decisions for investing in other countries (Shenkar, 2001), due to these findings it can be assumed that cultural distance seems to affect the decisions of foreign investment in the Anglo and Germanic cluster, except from Germany in the Germanic cluster. Regarding the other clusters, cultural distance seems to affect decisions to a lower extent. In the same manner, these findings suggest that the Anglo and Germanic clusters are more resistant to invest in culturally different markets, whereas the Latin, East and Nordic clusters are less resistant to invest in markets with cultural differences. Shenkar (2001) argued that trade between culturally different markets would contribute to overcome the barrier of unfamiliarity, and from these findings, it can be assumed that this barrier has lessened, especially for the Latin, East and Nordic clusters. Further, these findings suggest that unfamiliarity no longer intimidates as in the past. It does not seem like trade between countries with large cultural distances is generally perceived as being especially risky, due to unknown markets. The findings imply that what used to be unknown has become more familiar.

The findings do not directly support Ronen and Shenkar's (2013) cultural map in terms of public procurement trade, but it does not reject the impact of cultural distance either. The proportion of 48,6% contracts awarded within the clusters suggests that the majority of the contracts are awarded outside the cultural clusters, but due to variations in each country's awarded contracts, there are indications that reveal a larger impact of cultural distance in trade than the percentage for the countries combined, implies. In this sense, cultural distance does not necessarily affect the trade of the EU countries, but the countries are not directly impervious to cultural difference either.

Ronen and Shenkar (2013) claim that, relative to economic freedom, the Anglo, Germanic, Latin and Nordic clusters are at a high level, whereas the East cluster is beneath the middle range. The findings of this study place Anglo, Germanic and Latin as the clusters with the highest level of trade within the clusters. Due to their high level of economic freedom and that these clusters are developed, it can be suggested that these clusters trade more within the clusters because they want supplies that are of similar standard of development as themselves, as Curran and Zignago (2012) argues. As the East cluster has a small level of trade within the cluster, and is perceived to have a lower level of economic freedom, it can be suggested that the East cluster award contracts to countries outside their cluster in order to receive inputs from countries that have more to offer in terms of industry and development. However, the fact that the Nordic cluster has less trade within the cluster than the East cluster has weakens this suggestion, as Ronen and Shenkar (2013) claim that the Nordic cluster has a high level of economic freedom.

Cultural distance as a factor of trade seems to vary for, and within, all the clusters. For a limited number of the countries it is rather clear that cultural similarities are preferred, for some countries it seem to have less significance, and other countries seem to be indifferent to whether the countries they trade with are culturally similar. It appears that the Anglo and the Germanic clusters are more affected by cultural distance in trade than the other clusters studied in this analysis. According to this analysis, the Anglo cluster indicates a pattern of trade based on cultural similarities, whereas the Germanic cluster create a pattern partly based on cultural similarities and partly based on the contracts awarded to Germany.

4.3 Patterns of trade in geographical proximity

This section addresses the contracting authorities' country, and the neighbouring countries, in order to determine if geographical proximity affects the choice of suppliers. Figure 4.10 presents the international contracts in terms of the proportion that was awarded to neighbouring countries, both within the EU and with Europe outside the EU, and contracts awarded to countries with no geographical proximity. Blue indicates the international contracts awarded to neighbouring countries within the EU, whereas green indicates the international contracts awarded to neighbouring European countries outside the EU. Yellow indicates the international contracts awarded to geographically distant countries, i.e. countries that are not in the geographical proximity of the contacting authorities.

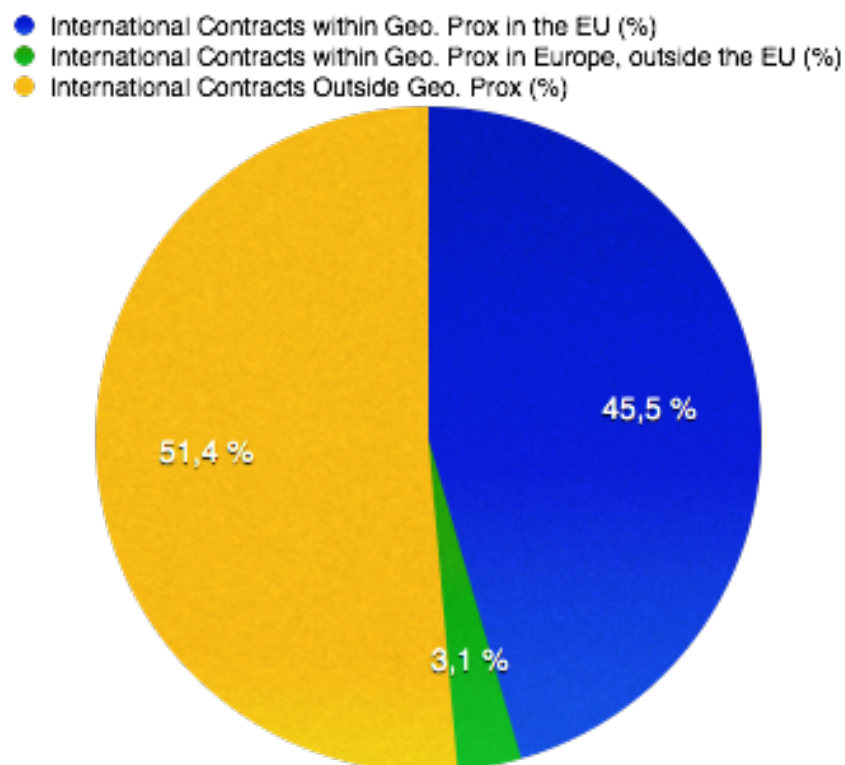


Figure 4.10 International contracts within and outside geographical proximity

Figure 4.10 shows that 45,5% of the contracts were awarded to EU countries with geographical proximity to the issuing country, whereas 3,1% were awarded to geographically close countries that are non-EU members. For Europe, with the EU and the non-EU members, 48,6% of the contracts were awarded to neighbouring

countries. 51,4% of the contracts were awarded to other countries, i.e. countries that do not share a border with the contracting authorities' country.

These findings suggest that geographical proximity is not of major influence in public procurement trade. As the proportion of international contracts awarded to neighbouring countries is almost equal to the proportion of international contracts awarded outside geographical proximity, it seems like the countries of the EU are indifferent to the question of whether their trading partner is a close or distant country. As geographical proximity decreases entry barriers (Shenkar, 2001) these findings may suggest that the majority of the EU countries do not see geographical distance as a barrier to trade. Further, it can be implied that transfer of competence and skills is not perceived to be more difficult as the geographical distance between trading partners' increase. The fact that transportation costs may rise, due to larger geographical distances (Shenkar, 2001; Vanagas, 2013) does not seem to affect trade between distant countries in Europe.

Vanagas (2013) found that countries that share borders trade 48% more than distant countries. However, the findings in this paper reveal that the results are rather different regarding public procurement. In this study, neighbouring countries tend to trade 4,4% less than distant countries. This may be due to the industrial market being less sensitive to consumer preferences than the consumer market, as Vanagas (2013) analysed in his study. The findings of this study then support Chung, et al. (2012) and Nakip's (1999) theory that industrial products are more suited for international markets since they are less sensitive to various preferences.

To investigate these relations further, figure 4.11 shows how each country distributes their international contracts in terms of geographical proximity. Again, blue indicates international contracts awarded within geographical proximity in the EU, green indicates international contracts awarded to non-EU member states but within geographical proximity of the contracting authorities, and yellow indicates international contracts awarded to countries with no common borders, i.e. countries outside the geographical proximity of the contracting authorities. For the corresponding table, see appendix 7, "Contracts within and outside geographical proximity".

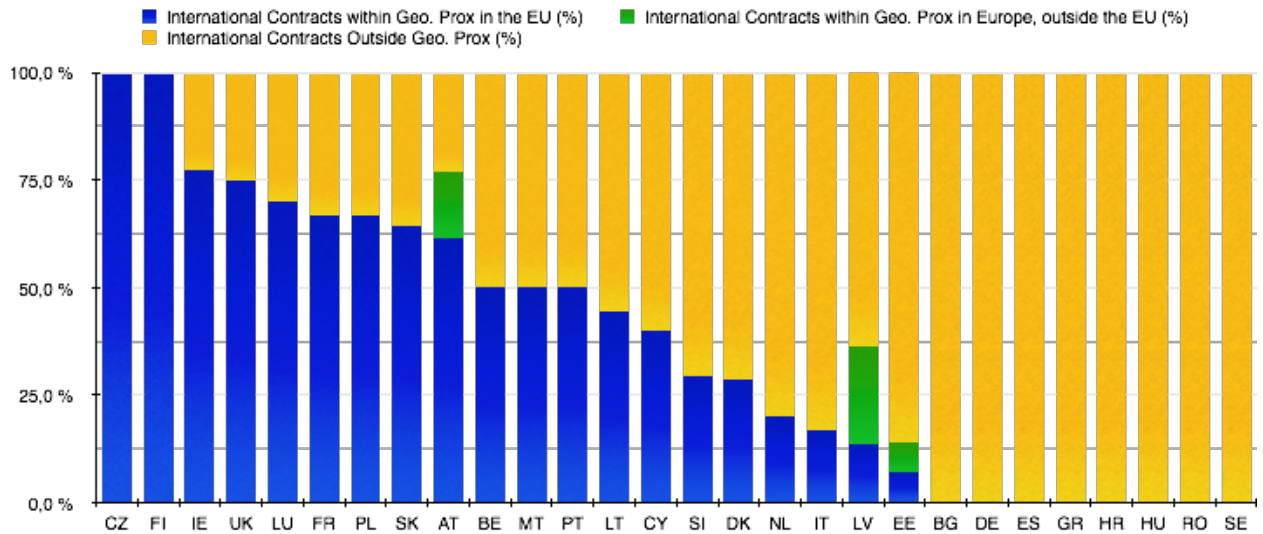


Figure 4.11 Trade within and outside geographical proximity

Figure 4.11 shows various distributions of the international contracts, both in terms of geographical proximity and proportions. It is clear that contracts awarded within geographical proximity and non geographical proximity are most common, whereas contracts awarded to adjacent countries that are non EU members is infrequent, as the latter is the case in only three countries. There are two countries, Czech Republic and Finland, where 100% of their international contracts were awarded to countries that share borders with the issuing country. On the other hand, there are eight countries - Bulgaria, Germany, Spain, Greece, Hungary, Croatia, Romania and Sweden - that did not award any contracts to neighbouring countries. Further follows an examination of how each country has distributed their contract awards to neighbouring countries.

4.3.1 Patterns of trade in each EU country

The geographical proximity trade of each country will be examined in further detail, starting with the countries that have the largest proportion within geographical proximity. See table in appendix 8, “Contracts within geographical proximity”.

Czech Republic shares borders with Poland, Germany, Slovakia and Austria, where these countries received respectively 60%, 10%, 10% and 20% of the contracts. All of the contracts issued from Finland went to the neighbouring country, Sweden. According to Shenkar (2001), it can be assumed that Czech Republic and Finland take

advantage of geographical proximity, as these two countries may emphasize low entry barriers, as low transportation costs and easy transfer of knowledge and skills. According to Huang (2007) Finland, as a Nordic country, should be more open to unfamiliar countries, than this analysis shows.

Ireland awarded 77,3% of their contracts to United Kingdom, and United Kingdom awarded 75% to Ireland. These findings may support what Vanagas (2013) suggests about these two countries' beneficial geographical location to each other. In addition, Ireland and United Kingdom are geographically located in the British Isles, which implies that they have greater distance to other trading partners across the sea. It can therefore be assumed that their relative remoteness has an influence on the trading pattern between these countries. Regarding Huang's (2007) tolerance to uncertainty, Ireland and United Kingdom are seen as countries that are tolerant for distant trade. However, according to the findings of this analysis, Ireland and United Kingdom trade supremely with adjacent countries, which in this case refutes Huang's (2007) statement.

Luxembourg awarded 70% of their contracts to countries with common borders, where Germany received 60%, and France received 10%. France and Poland awarded 66,7% of their contracts to adjacent countries. In France's case, 33,35% was awarded to Italy and 33,35% to Germany. From Poland, the whole proportion of 66,7% of international contracts was awarded to Germany. With the high level of adjacency trade, it can be assumed that these countries also prefer low entry barriers. As members of the G7, France, Italy and Germany, are large, industrial countries (Laub, 2014). Due to this, it can also be assumed that the above-mentioned countries benefit from these countries' industries, in terms of public procurement. Curran and Zignago (2012) state that a region of trade may be characterized by the countries' approximately equal level of technology, and that countries with a high technology level usually have a strong international focus. Curran and Zignago's (2012) findings are supported for these countries, as they all are ranked relatively high on geographical proximity trade and a pattern of geographical proximity trade seems to be concentrated in this area. As western countries, Luxembourg and France are tolerant to uncertainty, which may imply, according to Huang (2007) that these countries are tolerant to trade with distant countries. As these findings suggest,

Luxembourg and France are more likely to trade with adjacent countries, which to some extent contradicts Huang (2007) in terms of public procurement.

The pattern of trade in these countries may suggest that they take advantage of each other's geographic location, i.e. geographic proximity in the centre of Europe. Figure 4.12 provides visibility of this, and in addition includes all trade from the EU countries to adjacent countries, where some countries have been explained, and others will be explained further.



Figure 4.12 Trade within geographical proximity in the EU

(Adapted from the European Commission, 2013).

Figure 4.12 illustrates a map of Europe, with the EU countries in blue, and non-EU countries in grey. Figure 4.12 also illustrates the geographical proximity trade for each of the EU countries. The green lines indicate distribution of contract awards. Green lines with arrows at both ends indicate mutual trade between the countries, whereas dots at both ends indicate unilateral trade.

Slovakia awarded 64,3% to countries with shared border, where Czech Republic received all of these, which shows mutual trade, as Czech Republic awarded contracts to Slovakia as well. This is shown with a line with arrows in figure 4.14. Due to the trade with Czech Republic and the geographic location of Slovakia, it can be assumed that Slovakia tends to join the concentration around Germany. In the same manner, but better geographically located, Austria, also seems to join the trend, since 61,5% of their contracts were awarded to their neighbouring country, Germany. However, Austria also awarded 15,4% to Switzerland, which is a neighbouring country, but not a member of the EU.

Portugal, Malta and Belgium all awarded 50% of their international contracts to countries with common borders. Portugal awarded all of these to Spain, which may be because Portugal is a geographically cut off from the rest of from Europe by Spain. This can also support Vanagas (2013) argument that a country's distance to other trading partners may affect the country's trading pattern. Portugal's trade with Spain is not mutual, an aspect that may imply, in accordance with Vanagas (2013) that Spain can influence Portugal's trade, as Spain "represents" Portugal's distance to other trading partners. Malta awarded all of their common border contracts to Italy, which is consistent with this paper's assumption that Italy and Malta are strongly connected. In addition, this also implies that Italy is of importance to Malta, in terms of public procurement. This pattern may also support Vanagas (2013), as Malta also is a remote country. On the other hand, Belgium awarded 25% to Germany, 12,5% to Netherlands and 12,5% to France. Again, as the majority of these contracts were awarded to Germany, Belgium may also be a part of the German sphere of trade influence. According to Huang (2007) Portugal and Malta, as southern countries, are less tolerant to the unknown and hence to distant trade, whereas Belgium is more tolerant. These findings suggest that these three countries are indifferent to

uncertainty or the unknown, as they award 50% of their international contracts to adjacent countries, and 50% to more distant countries.

Lithuania had 44,4% of their international contracts awarded to neighbouring countries, where Latvia received all of these. Cyprus is also dependent on one neighbouring country. While Cyprus awarded 40% of their contracts to adjacent countries, all of these were awarded to Greece, which is consistent with this paper's assumption that Greece and Cyprus are geographically (and culturally) connected, and shows that Cyprus sees Greece as a major trading partner.

Slovenia awarded 29,4 % to their neighbouring countries where 23,5% of these went to Croatia, and 5,9% went to Austria. Denmark awarded 28,6% of their international contracts to adjacent countries, where 14,3% of these were awarded to Germany and 14,3% to Sweden. The Netherlands awarded 20% to adjacent countries, where all of these went to Germany, and Italy awarded 16,7% to adjacent countries, where all of these went to Austria. Huang (2007) states that Denmark and the Netherlands are likely to trade with unfamiliar and distant countries due to their tolerance to uncertainty. These findings support Huang's (2007) statement, as Denmark and the Netherlands award the majority of their contracts to countries outside their geographical proximity. Regarding Italy, Huang (2007) argues that this country is less tolerant to the unknown, and therefore trades more with adjacent countries. These findings reveal the opposite, as only 16,7% of the international contracts from Italy were awarded to neighbouring countries.

Latvia awarded 13,6% of their international contracts to countries with shared borders, where 9,1% of these went to Estonia and 4,5% to Lithuania. This indicates mutual trade as Lithuania also awarded contracts to Latvia. However, Latvia also awarded 13,6% to Russia, and 9,1% to Belarus, which are neighbouring countries but not members of the EU. Estonia had only 7,1% of their international contracts awarded to countries with common border, where all of these went to Latvia. This also evidences mutual trade as Latvia awards contracts to Estonia. Estonia also awarded 7,1% to Russia, which is not a member of the EU. The trade of these eight last countries (from Lithuania and down) disproves Vanagas (2013) and Shenkar's (2001) statement that adjacent countries trade more than distant countries, as these

countries trade more with distant countries than adjacent countries. This also implies that, for these eight countries, the fact that transportation costs rise due to long distances (Vanagas, 2013; Shenkar, 2001) does not influence the trade of public procurement.

Bulgaria, Germany, Spain, Greece, Hungary, Croatia, Romania and Sweden did not award any of their international contracts to adjacent countries. Neither did these countries award any of their contracts to non-EU European countries. In other words, all of the international contracts issued from these countries were awarded to non-geographical proximity countries. Thus, these countries also disprove the arguments of Vanagas (2013) and Shenkar (2001), as these countries, according to this analysis, only trade with distant countries. For Sweden and Germany, this supports Huang (2007) statement that Nordic and Germanic countries are tolerant to uncertainty, and thus more open to distant trade. Huang (2007) found that southern countries, as Greece, Croatia and Spain are less tolerant to uncertainty, and thus less interested in distant trade. For Greece, Croatia and Spain, the findings of this analysis show the opposite, as these three countries trade with distant countries, rather than close countries. Thus, these findings may suggest that Greece, Croatia and Spain have a higher degree of actual openness than what Huang (2007) indicated, and that they actually take advantage of their beneficial geographical location.

Huang (2007) did not mention the countries in the east of Europe, but as these countries have various distributions, from Czech Republic with 100% of their contracts awarded to neighbouring countries, to Hungary, Bulgaria and Romania with no contracts awarded to neighbouring countries, it does not seem like a common denominator can be derived from these findings.

Regarding countries that are adjacent to non-EU countries, Latvia awarded contracts to Russia and Belarus, and Austria to Switzerland. Latvia awarded 13,6% of their contracts to Russia, and 9,1% to Belarus, which can imply that the fact that Russia and Belarus are not EU member states does not seem to have a negative impact on Latvia's choice of trading partners. In the same manner, Austria awarded 15,4% of their international contracts to Switzerland. Through these findings, it can be assumed that countries that share borders with both members and non-EU members see both as

potential trading partners. Thus, a neighbouring country being an EU member may be beneficial in the choice of trading partners, but a neighbouring country not being an EU member does not necessarily decrease the possibilities of a contract awarded from an EU country.

As figure 4.12 (page 63) illustrates, these findings of geographical proximity suggest a large industrial cluster around Germany, and a smaller industrial cluster, presumably based on recent history, of Estonia, Latvia, Lithuania, and non-EU members Belarus and Russia. Regarding Germany, the cluster that appears may be due to Germany's beneficial geographical location in the middle of Europe, combined with its high industrial level and its seemingly international focus. Especially with Germany, France and Italy, as countries of the G7 (Laub, 2014), and to some extent Poland, it can be suggested that the size of these countries and their beneficial geographic location (Vanagas, 2013) may be important variables for other countries to have them as trading partner. Czech Republic, Austria and Belgium and the Netherlands seem to utilize their geographical position close to the large countries. As for Estonia, Latvia and Lithuania, these countries are geographically located somewhat distant from the centre of Europe. It can be assumed that they tend to trade with Belarus and Russia due to their geographical position and shared history. With or without Russia and Belarus, it seems like a mutual trading pattern exists between these countries.

4.4 Patterns of international contracts within the EU, Europe and outside

As the aim of EU is the single market with equal opportunities for all member states, this paper will examine the international contracts awarded by EU countries in order to assess the degree of trade within the single market and Europe.

Figure 4.13 presents the proportions of international contracts that are awarded by EU public authorities to suppliers within the EU, in other European countries (i.e. non-member states), and in countries outside Europe. Blue indicates contracts within the EU, green indicates contracts to non-EU member states in Europe, and yellow indicates contracts to countries outside the EU and Europe.

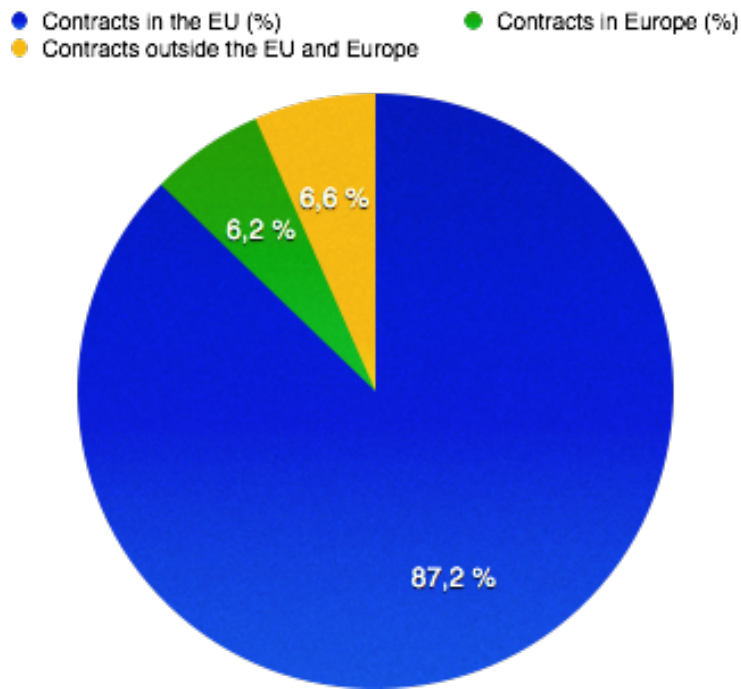


Figure 4.13 International contracts within the EU, Europe and outside

Figure 4.13 shows that EU public authorities have awarded 87,2% of the international contracts to other EU countries. This is a relatively high number, which shows that in terms of the international contracts there are strong trading patterns between the EU member states in public procurement. In this respect, the single market must be seen to be a success in that the value created by nearly 90% of public procurements in the EU remains within the EU. Contracts awarded from the EU to other European countries outside the EU represents 6,2%. Trade between the EU countries and Europe, as a whole, including non-member states, constitutes 93,4% of the awarded contracts. Only 6,6% of the contracts were awarded outside Europe.

By examining each country separately, it will be possible to assess each country's proportion of contracts. Figure 4.14 illustrates the EU countries' proportions of contracts awarded to other EU member states, to other European countries outside the EU, and to countries outside Europe. Again, blue indicates contracts awarded within the EU, green indicates contracts awarded to European countries that are non-EU members, and yellow indicates contracts to countries outside the EU and Europe. For the corresponding table, see appendix 5, "Contracts in the EU, in Europe and outside".

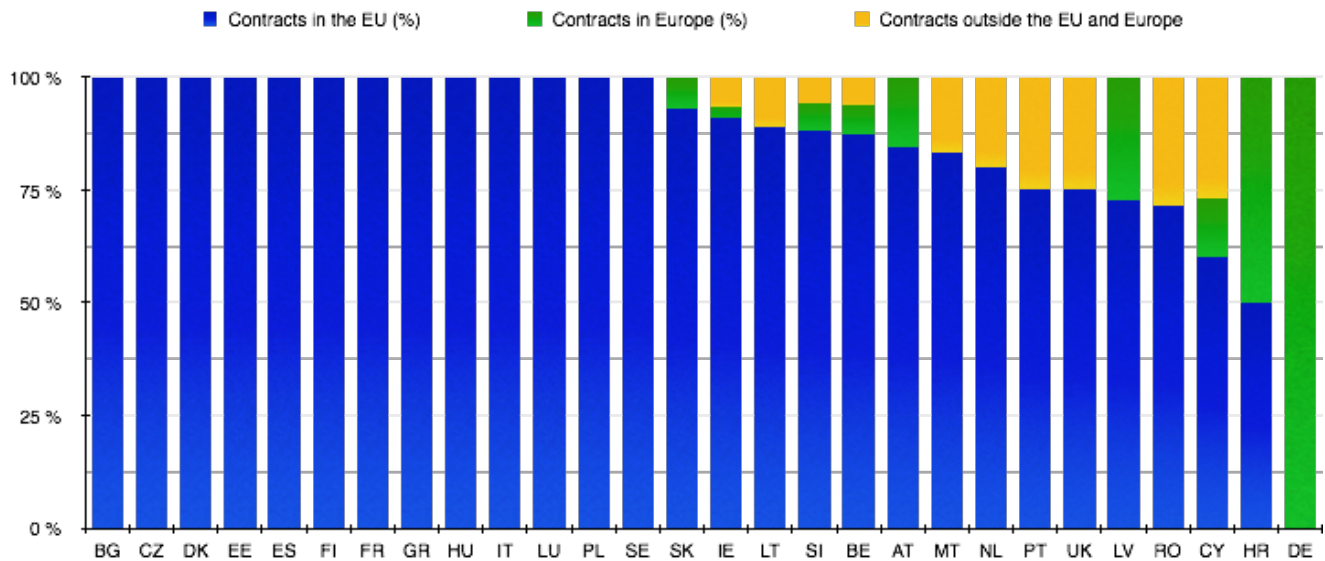


Figure 4.14 Trade within the EU, Europe and outside

Figure 4.14 shows that 13 of 28 countries have awarded all of their international contracts to other countries that are EU-members. Nine countries have awarded contracts to European countries that are non-EU members, whereas only one country has awarded all their international contracts to non-EU members in Europe. Ten countries have awarded contracts to countries outside the EU and outside Europe. There are only four countries that have awarded contracts to countries outside the EU and Europe as well as to EU member states and other European countries.

These findings indicate that the EU countries definitely trade the most with other EU countries, regarding public procurement. The result of 87,2% contracts that are awarded within the EU, suggest that the EU countries prefer to trade with other EU countries. This may be due to the fact that these countries are in similar situations, which supports Mandjak, et al.'s (2011) proposal of preferences. It also suggests that, in terms of the proportions of international contracts, international suppliers are included, which according to Arlbjørn and Freytag (2012) is one of the aims of the public sector.

According to Chung (2005), it is claimed that the different markets in the EU are unlikely to become similar, and that the differences in the markets is a major obstacle. However, according to this analysis this does not seem to affect the trade within the

EU, nor the trade within Europe. It can then be assumed that the common set of rules improves the trade between EU member states, even though Chung (2005) suggests that the rules will not lead to disappearance of the cultural differences. These findings imply that the role of the joint rules may outweigh the differences in the countries of Europe.

Curran and Zignago (2011) identified the EU as the most integrated trading bloc, compared to others. This study does not compare the EU with other trading blocs, but by examining the international contracts and due to the proportion of 87,2% of them being awarded within the EU, it can be assumed that the EU is reasonably well integrated in terms of the proportion of international contracts in public procurement.

Germany awarded their whole proportion of international contracts to non-EU member Turkey (see appendix 2, “Cross table”). Turkey also received Croatia’s proportion of international contracts to non-EU member countries within Europe.

Both Cyprus and Latvia awarded international contracts to non-EU members Switzerland and Russia, and Latvia also awarded contracts to Belarus. Austria, Belgium and Slovenia also awarded contracts to non-EU member Switzerland, whereas Ireland awarded contracts to non-EU member Norway, and Slovakia awarded to non-EU member Russia.

Regarding countries outside the EU and Europe, Romania awarded their whole proportion to Canada, whereas Cyprus awarded contracts to China, Israel and the United States. Portugal, the United Kingdom and Slovenia awarded all of their “outside the EU and Europe” contracts to the United States. Malta awarded contracts to China and India, the Netherlands awarded contracts to Israel and Lithuania awarded to Singapore. Belgium awarded their proportion to Hong Kong, and Ireland awarded contracts to Canada, South Africa and the Marshall Islands. This indicates that countries within the EU trade the most with other EU countries, followed by other countries in Europe, and then other countries and other continents.

Further, trade within the cultural clusters, geographical proximity and trade within the EU will be connected, to provide a clearer context.

4.5 Summary of trade patterns in public procurement

When combining cultural clusters and geographical proximity, it is possible to see more clearly which countries prefer to trade with cultural similar countries, and/or with countries that are geographically nearby. Figure 4.15 illustrates all international contracts awarded within cultural clusters and geographical proximity in blue, and international contracts awarded outside the cultural clusters and geographical proximity in green.

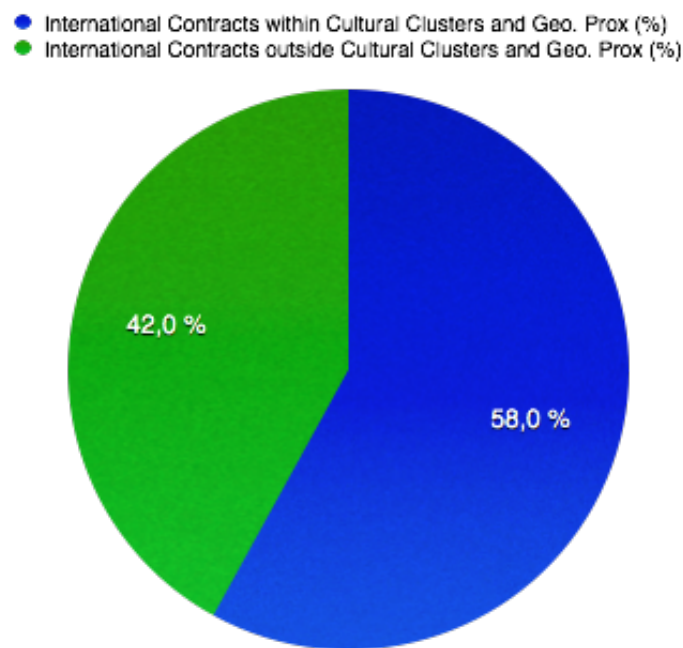


Figure 4.15 International contracts within and outside cultural clusters and geographical proximity

Figure 4.15 shows that international contracts within both cultural clusters and geographical proximity represents 58% of all the international contract awards. Contracts awarded outside the cultural clusters and geographical proximity is then the remainder of 42%. This suggest that the majority of the contracting authorities prefer to trade with culturally similar and geographically close countries, but, since these proportions are relatively close to each other, it is essential to examine each country separately.

Figure 4.16 illustrates each country of the EU, and their proportion of international contracts awarded within cultural clusters and geographical proximity in blue, and their proportion of international contracts awarded outside the cultural cluster and

geographical proximity in green. See appendix 9 for the corresponding table “Cultural clusters and geographical proximity”.

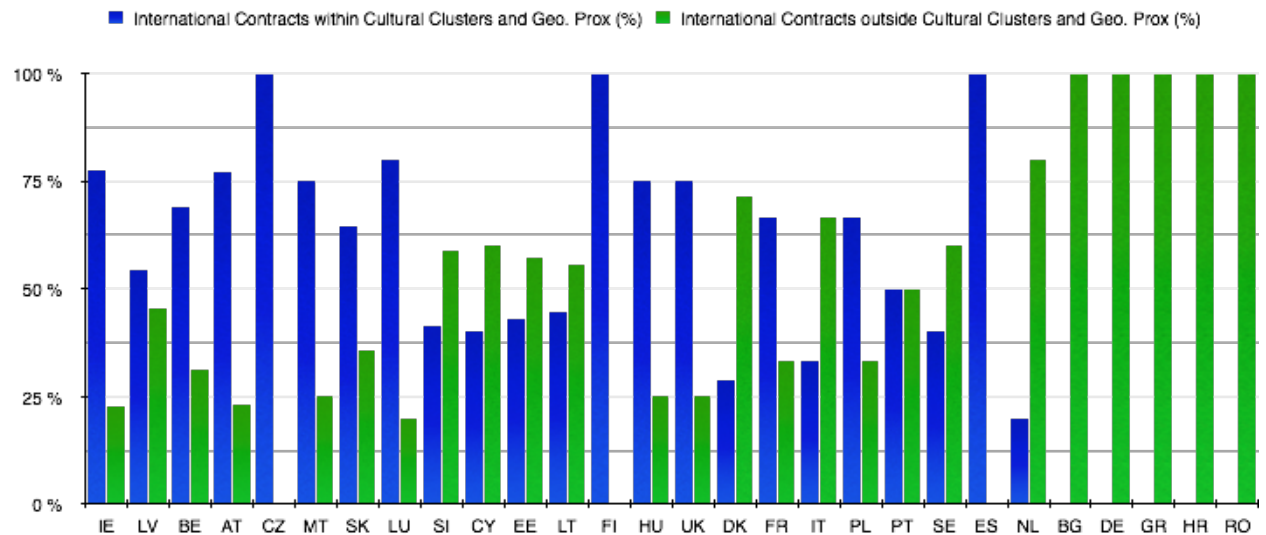


Figure 4.16 Trade within cultural clusters and geographical proximity, and outside

Figure 4.16 illustrates that Finland, Czech Republic and Spain have awarded all their international contracts to countries that are adjacent and within the same cultural cluster. Countries that have awarded more than 60% of their international contracts to countries that are adjacent or in the same cultural cluster are Ireland, Belgium, Austria, Malta, Slovakia, Luxembourg, Hungary, United Kingdom, France and Poland. Except for Spain, Finland, Ireland, United Kingdom and Malta, all of these countries are geographically located in the centre of Europe, which is seen as a beneficial location for trade. The countries located on the periphery of Central Europe are mostly countries that this analysis shows to be dependent on other countries, as they award most of their contracts to countries closer to the centre of Europe. Finland awards all of their international contracts to Sweden, where Sweden is geographically located closer to the centre of Europe, than Finland. Spain and Malta award most of their international contracts to Italy, and may so be dependent on Italy, and United Kingdom and Ireland are dependent on each other. In terms of both cultural distance and geographical proximity, Ireland and the United Kingdom have proved a pattern of mutual trade.

Countries that have awarded between 40-60% of their international contracts within the cultural clusters and to neighbouring countries are Latvia, Slovenia, Cyprus, Estonia, Lithuania, Portugal and Sweden. All of these countries are geographically located on the periphery of Europe. Estonia, Lithuania and Latvia create a pattern of trade, as these countries are geographically located together in the periphery. Their pattern is to some extent influenced by geographical proximity and similar culture, but it is the interdependence between these countries that strengthen their pattern of trade.

Countries that have awarded 20-40% of their international contracts to countries within geographical proximity and cultural clusters are Denmark, Italy and the Netherlands, where the Netherlands and to some extent Italy are geographically located in the centre, whereas Denmark is geographically located at the edge of the centre of Europe. The countries that awarded all of their international contracts outside the geographical proximity and outside the cultural clusters are Bulgaria, Germany, Greece, Croatia and Romania. All of these countries, except Germany, are located on the periphery of Europe.

These findings indicate that, in terms of this analysis, the countries that prefer to trade with culturally similar and geographically close countries, are largely the countries that are advantageous located in the centre of Europe, where these countries have trade opportunities with many close and culturally similar countries. The countries that have a lower score on contracts awarded within geographical proximity and within cultural clusters, are largely countries located on the periphery of Europe who award their contracts inwards to the European centre. Figure 4.17 illustrates a map that represents this analysis of the patterns of public procurement in the EU. The nationality of the contracting authorities and the awarded suppliers are placed in order to see the main patterns of which countries that awarded contracts to which countries.



Figure 4.17 Patterns of public procurement trade in the EU

(Adapted from the European Commission, 2013).

Figure 4.17 illustrates a map of Europe and the EU countries in blue. It shows the results of this analysis, representing the patterns of public procurement trade in the EU. The figure is derived from the data gathered from the contract awards, corresponding to appendix 2, “Cross table”. The green lines indicate where the contracts are issued and where they are awarded. The contracts that were awarded to countries outside Europe are indicated in the direction of the location of the country.

A country that stands out in this comparison is Germany as a supplying country, which is awarded contracts from almost all the other countries of the EU. In fact, only

seven of the 28 countries studied, did not award any contracts to Germany, which indicates that as a supplier Germany has a high level of trade in public procurement with many countries. According to Vanagas (2013), Blum and Goldfarb (2006) and Curran and Zignago (2012) this may be due to the beneficial location of Germany, its size, and the country's high level of technology. Huang (2007) argues that Germany is a geographically open country and tolerant to uncertainty, which combined provides an actual openness. For Germany as a supplier, these arguments are supported by the findings of this analysis. This also creates a pattern of trade with Germany in the centre, as Germany is the country that has been awarded the highest number of contracts from the highest number of countries in this analysis.

Other than Germany, Spain receives contracts from nine countries, whereas United Kingdom, France, Italy and Austria receive contracts from eight countries. Just after follows the Netherland, which receives contracts from seven countries, and Czech Republic, which receives contracts from six countries. This means that the G7 countries plus Spain, Austria, the Netherlands and Czech Republic receive contracts from the most countries. This indicates that these countries are attractive trading partners in terms of public procurement, which may result from the G7 being highly developed, and that Spain, Austria, the Netherlands and Czech Republic are close behind the G7 in Europe. On the other hand, the G7 are among the countries that, in terms of this analysis, award the fewest contracts to international suppliers (see appendix 4 "National and international contracts"). This may, in terms of public procurement, underpin Laub's (2014) statements that to some extent the G7 countries are more concerned about domestic relations rather than international relations.

Latvia, Estonia, Ireland, Belgium, Cyprus, Slovenia and Denmark award contracts to the most countries. In the awarding group, four of the seven countries are located in the East of Europe, and are, according to Ronen and Shenkar (2013) classified as below the middle range on economic freedom. This indicates that these countries take advantage of other countries' industries that are more developed than their own.

In terms of the single market and the EU, the most significant findings reveal a strong pattern of trade within the EU and within Europe. Germany in the centre of Europe appears to be a major force in the single market. These findings could be interpreted

to suggest that the high level of trade within the EU is a result of the procurement directives, and that these outperform both geographical proximity and cultural clusters in terms of public procurement trade. However, the effects of cultural clusters and geographic distance result in distinct trading patterns and disparities that counter the aims of the single European market concept. Thus, the theories of Chen (2004), Vanagas (2013), Ronen and Shenkar (2013) and Huang (2007) are both refuted and supported in this analysis.

On the other hand, it is important to remember that the overwhelming majority of the contracts are awarded to domestic suppliers, which can be seen as a setback for the single market since the pattern of choosing domestic suppliers outperforms the impact of the single market. According to Arlbjørn and Freytag (2012) it is important to include international suppliers to enhance the competition, but this analysis provides results that show the extent of international supply being low, which indicates that competition within public procurement is not optimal.

It is essential to recall that the suppliers submit tenders to contracting authorities that they want to trade with. This analysis is based on the awards made by the contracting authorities, and does not take into account the nationality of the potential suppliers who submitted tenders for the respective contracts. It may be reasonable to assume that suppliers prefer submitting tenders to contracting authorities in countries that are in the same cultural cluster as themselves or in neighbouring countries. However, no data is available on the nationalities of the suppliers who submitted tenders for the awarded contracts. Thus, the results of this analysis with regard to the split between international and domestic contracts may be partially due to suppliers' reluctance to submit tenders outside their zone of cultural and geographic comfort, and not solely due to factors driving the decisions of the contracting authorities. The rules in public procurement do not allow the contracting authorities to "choose" the nationality of their suppliers – directly at any rate. But suppliers are free to choose in which countries they submit tenders. The analysis may then be somewhat distorted if it is mostly (or only) domestic suppliers that have submitted tenders. This may be the case since, according to Burkert, et al. (2012), domestic relationships of trade are presumably better than international trading relationships, and suppliers may be less interested in submitting an international tender as they know that there is a risk for

international relationship to be poorer. Nonetheless, considering the preponderance of domestic contracts compared to international contracts, the general conclusion that the level of international trade in public procurements in the EU remains extremely low is valid regardless of the cause or causes.

However, the trends that emerge from the relatively few international contract awards seem to benefit the single market, which suggests the potential of the single market should it be possible to eliminate favouritism of domestic suppliers. Extended use of the “economically most advantageous tender”- criterion may serve to support domestic favouritism as, according to Bergman and Lundberg (2013), this may be used in order to “choose” a supplier independently of the regulations.

It can be suggested that TED supports the opening of the market, to some extent. Enhancing the number of users even more may further extend the opening up of the market. Fee and McIlroy (1998) complain that the users of TED are not as many as the number of those who could benefit from TED. Comparing the results of this study to the result of Martin et al.’s (1997) with 97,9% domestic contracts, it is suggested that the proportion of contracts awarded to international suppliers has increased, and that this may be due to the availability of information in TED.

5. Conclusions and implications

The main objective of this thesis has been to examine public procurement within the EU in order to identify patterns of international trade. Empirical industrial data, as in 2621 contracts awarded from the 28 member countries of the EU have been analysed. Each country's proportion of national or international contracts has been emphasized. The international contracts have been examined in terms of cultural distance and geographical proximity, and the trade within the EU has been assessed. The study evidences five patterns of trade within the EU.

The pattern of favouring domestic suppliers applies to 27 of the 28 EU countries, which reveals that an inordinately small amount of contracts are awarded to international suppliers. It is therefore found that public authorities prefer to trade with suppliers of the same nationality.

However, the proportions of the international contracts show three distinct patterns of trade within the EU. Based on cultural distance and geographical proximity, it is found that the Anglo cluster with Ireland and United Kingdom have a strong trading pattern of interdependent trade.

The findings of the analysis present a concentric pattern of public procurement trade within the EU, with Germany as its locus. Germany, in the centre of Europe, receives contracts from nearly all the other EU countries. Circling around Germany, France, Italy, Austria, the Netherlands, Poland and the Czech Republic form a ring of secondary loci for incoming contracts. Spain and the United Kingdom, on the periphery, also received a large number of incoming contracts. This indicates that geographical proximity combined with a high level of technology are shaping forces determining trading patterns within the centre of Europe.

Relatively isolated from the rest of the EU, Latvia, Lithuania and Estonia forms a pattern of mutual trade, which is shaped by cultural distance as well as geographical proximity. In addition, non-EU members Russia and Belarus reinforce this pattern.

The overall findings identify a clear pattern of public procurement trade being concentrated within the EU. Countries outside the EU and outside Europe are awarded relatively few international contracts compared to the number of contracts that are awarded within the EU. There is insufficient evidence to determine whether this concentration within the EU is an indication of a growing pan-European “domestic” market being shaped by the common legislation, or simply by a natural effect of the phenomenon of cultural distance and geographical proximity. However, as the legislation is established with the aim of free trade in the single market, and that these findings reveal high levels of cultural and geographical trade, it is reasonable to believe that public authorities choose their suppliers based on their nationality, regardless of the directives.

Thus, the patterns of trade within the EU are shaped by cultural distance and geographical proximity. This leads to the conclusion that the single market has not led to a remarkable increase in the member states’ level of cross border trade, as it is found that the international trade to some extent is restricted to culture and geography.

5.1 Implications

Although, further research may be needed, an implication that appears is that the EU legislation and directives have not led to a significant increase in the overall level of international trade in public procurements within the EU. It may be argued that the single market concept is fostering the development of a larger pan-European “domestic” market, where what relatively little international trade exists is largely carried out internally in the EU. These results suggest that suppliers need to be more encouraged to participate in tender processes in other countries, and contracting authorities need to include international suppliers with the aim of enhanced cross border trade. This will strengthen the competition of public procurement, as well as the single market.

However, trade patterns in public procurement in the EU are seemingly still influenced more by culture and geographic factors than by the single market concept. This barrier may be reduced by a more evident practice of the legislation, and through this increase the number of users of TED. The TED database may be beneficial with

the aim of better communication and opportunities for all the trading parties, regardless of where they are located. Further attention from the European Council and the EU Commission is required if “intramural” trade in public procurement within the EU is to grow.

Taken together, these findings contribute empirically to research that emphasizes trade between member countries of the EU. The thesis discusses and identifies the countries that have a discriminative behaviour towards international trade in public procurement. This gives an indication of the EU member states integration of the single market, in terms of public procurement. Further, this also shows the level of international trade from the EU countries, and if the trade is restricted to cultural distance or geographical proximity. It provides results that show the attractiveness of the countries in the public procurement market. Thus, the study reveals research on patterns that may be of practical use for suppliers’ decision-making. With this regard, it shows which country it may be beneficial to submit a tender in, as it shows where the opportunities exist, i.e. which countries that are more or less open in terms of international trade.

5.2 Limitations and further research

This study is limited to its reasoning on the casual relationships. The causal relationships, i.e. *why* contracts are awarded to the countries they are awarded to, cannot be answered with certainty, in this study. In terms of the directives from the EU, and in a perfect world, causal relationships should not exist, as the award of a contract should be based only on the criteria stated in the contract notice, regardless of the nationality or the location of the supplier or any other factor. Thus further research can emphasize these relationships, which also may strengthen the findings of this thesis. Countries that will be particularly interesting in terms of causal relationships are the countries that were awarded many contracts as Germany, France, Italy, Austria, the Netherlands, Poland, Czech Republic, Spain and the United Kingdom.

Another limitation is the contract award notices that are classified as “not applicable”, as this may reveal a less complete sample. A question that has been raised is why the published contract award notices often lacks information. In the analysis of the

contracts, it was seen that some of the elements that are supposed to be included in the contract award notice, were not included. Some countries were consistent in what they included, where for example information on the supplier and price were stated often in one country, but in other countries these elements were almost never stated. Future research may be able to identify patterns of which elements are usually included for various countries and identify why elements are often omitted. An interesting finding could be to what extent the elements that are included vary within countries, sectors or industries. Another interesting aspect could be how the EU or the legislation handles the situation if the contract awards are not filled in terms of the directives.

This study is limited to public procurement in the Utilities sector. Further research could focus on other sectors, in order to find similarities and differences. This may contribute to the understanding of the public procurement market, as well as the single European market in terms of public procurement.

As this study is built on current patterns, it may be of interest to repeat this analysis in a few years' time to see the development of international trade of public procurement. This may also be seen as a limitation as this analysis has emphasized contracts from the last five years, and hence does not state the future. It could be interesting to include more elements from the contract award to determine if inclusion of more elements would lead to different or more certain conclusions. It would then be beneficial to see if all the elements that the contract award should contain, is specified, or if more contract awards lacks information. Another aspect is to include the award criterion ("lowest price" or "economically most advantageous tender") to determine if there is correlation between the criterion used and the choice of suppliers.

It may also be interesting to study the contract notice compared to the contract award. As the contract notice should include several elements that are also included in the contract award, an interesting finding could be if the contract notice and contract award are as consistent as they should be. Due to the choice of procedure (open, restricted, and negotiated), especially in terms of the negotiated procedure, it would be interesting to see the results of the negotiated procedure. As this procedure allows

negotiations between contracting authorities and potential suppliers, a question that has been raised is if contracting authorities may use the information from the potential suppliers in order to create a contract where the best practices is taken from the potential suppliers, drawn up together and awarded to a single supplier.

Research could also focus on the frequency of the Prior Information Notice, since the publicity of this notice is beneficial for international suppliers, due to planning and costs of submitting a tender in another country.

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Contract award template

This document is cited from Directive 2004/17/EC of the European Parliament and of the council of 31 March 2004:

INFORMATION TO BE INCLUDED IN THE CONTRACT AWARD NOTICE

I. Information for publication in the Official Journal of the European Union (1)

1. Name and address of the contracting entity.
2. Nature of the contract (supplies, works or services and Nomenclature reference No(s); where appropriate state if it is a framework agreement).
3. At least a summary indication of the nature and quantity of the products, works or services provided.
4. (a) Form of the call for competition (notice on the existence of a system of qualification; periodic notice; call for tenders);

- (b) Reference of publication of the notice in the Official Journal of the European Union;
- (c) In the case of contracts awarded without a prior call for competition, indication of the relevant provision of

Article 40(3) or Article 32.

5. Award procedure (open, restricted or negotiated).
6. Number of tenders received.
7. Date of award of the contract.
8. Price paid for bargain purchases pursuant to Article 40(3)(j).
9. Name and address of the economic operator(s).
10. State, where appropriate, whether the contract has been, or may be, subcontracted.
11. Price paid or the prices of the highest and lowest tenders taken into account in the award of the contract.
12. Name and address of the body responsible for the appeal and, where appropriate, mediation procedures. Precise information concerning the time limit for lodging appeals, or, if need be, the name, address, telephone number, fax number and e-mail address of the service from which this information may be obtained.
13. Optional information:
— value and share of the contract which has been or may be subcontracted to third parties, — award criteria.

II. Information not intended for publication

14. Number of contracts awarded (where an award has been split between several suppliers).
15. Value of each contract awarded.
16. Country of origin of the product or service (Community origin or non-Community origin; if the latter, broken down by third country).
17. Which award criteria were used (most economically advantageous; lowest price)?

(1) Information in headings 6, 9 and 11 is deemed information not intended for publication where the awarding entity considers that publication thereof might be detrimental to a sensitive commercial interest.

18. Was the contract awarded to a tenderer who submitted a variant, in accordance with Article 36(1)?
19. Were any tenders excluded on the grounds that they were abnormally low, in accordance with Article 57?
20. Date of transmission of the notice by the contracting entity.
21. In the case of contracts for services listed in Annex XVII B, agreement by the contracting entity to publication of the notice (Article 43(4)).

The European Union																		
From/To	at	be	bg	cy	cz	de	dk	ee	es	fi	fr	gr	hr	hu	ie	it	lt	lu
AT	70	0	0	0	0	8	0	0	0	0	3	0	0	0	0	0	0	0
BE	2	73	0	0	0	4	0	0	2	0	2	0	0	0	0	1	0	0
BG	0	0	98	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
CY	0	0	0	37	0	0	0	0	0	1	0	6	0	0	0	0	0	0
CZ	1	0	0	0	82	2	0	0	0	0	0	0	0	0	0	0	0	0
DE	0	0	0	0	0	74	0	0	0	0	0	0	0	0	0	0	0	0
DK	0	1	0	0	0	1	80	0	0	0	0	0	1	0	0	0	0	0
EE	1	0	0	0	1	2	0	86	1	1	2	0	0	0	0	0	1	0
ES	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0	1	0	0
FI	0	0	0	0	0	0	0	0	0	81	0	0	0	0	0	0	0	0
FR	1	0	0	0	0	1	0	0	0	0	68	0	0	0	0	1	0	0
GR	0	0	0	0	0	1	0	0	0	0	0	91	0	0	0	1	0	0
HR	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0	1	0	0
HU	0	0	0	0	1	1	0	0	0	0	0	0	1	85	0	0	0	0
IE	0	0	0	0	0	1	0	0	0	0	1	0	0	0	44	2	0	0
IT	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	88	0	0
LT	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	90	0
LU	1	0	0	0	0	6	0	0	0	0	1	0	1	0	0	0	0	37
LV	0	0	0	0	2	3	0	2	0	2	0	0	0	0	0	0	1	0
MT	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	6	0	0
NL	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0
PL	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0
SE	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
SI	1	0	0	0	2	1	0	0	5	0	2	0	4	0	0	0	0	0
SK	0	0	0	0	9	3	0	0	0	0	1	0	0	0	0	0	0	0
UK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Contracts	79	75	98	37	98	118	80	88	101	85	82	97	66	85	47	102	92	37

(Continued)

From/To	The European Union										European countries non-EU				
	lv	mt	nl	pl	pt	ro	se	si	sk	uk	by	ch	no	ru	tr
AT	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
BE	0	0	2	0	0	0	0	0	0	1	0	1	0	0	0
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0
CZ	0	0	0	6	0	0	0	0	1	0	0	0	0	0	0
DE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
DK	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0
EE	1	0	0	3	0	0	0	0	0	0	0	0	0	1	0
ES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FI	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
FR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GR	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
HR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
HU	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IE	0	0	2	0	0	0	0	0	0	34	0	0	1	0	0
IT	0	0	2	0	0	0	1	0	0	1	0	0	0	0	0
LT	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0
LU	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
LV	78	0	0	3	0	0	1	0	0	2	2	1	0	3	0
MT	0	16	0	0	0	0	0	0	0	1	0	0	0	0	0
NL	0	0	83	0	0	0	0	0	0	0	0	0	0	0	0
PL	0	0	0	96	0	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	76	0	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	0	90	0	0	0	2	0	0	0	0	0
SE	0	0	2	0	0	0	79	0	0	0	0	0	0	0	0
SI	0	0	0	0	0	0	0	83	0	0	0	1	0	0	0
SK	0	0	0	0	0	0	0	0	85	0	0	0	0	1	0
UK	0	0	0	0	0	0	0	0	0	84	0	0	0	0	0
Contracts	83	16	94	109	76	90	86	84	86	129	2	6	2	6	2

(Continued)

From/To	Other countries outside the EU and Europe									Int. Contracts	Not applicable	Contracts
	ca	cn	hk	il	in	mh	sg	us	za			
AT	0	0	0	0	0	0	0	0	0	13	17	100
BE	0	0	1	0	0	0	0	0	0	16	11	100
BG	0	0	0	0	0	0	0	0	0	2	0	100
CY	0	2	0	1	0	0	0	1	0	15	24	76
CZ	0	0	0	0	0	0	0	0	0	10	8	100
DE	0	0	0	0	0	0	0	0	0	1	25	100
DK	0	0	0	0	0	0	0	0	0	7	13	100
EE	0	0	0	0	0	0	0	0	0	14	0	100
ES	0	0	0	0	0	0	0	0	0	1	14	100
FI	0	0	0	0	0	0	0	0	0	3	16	100
FR	0	0	0	0	0	0	0	0	0	3	29	100
GR	0	0	0	0	0	0	0	0	0	4	5	100
HR	0	0	0	0	0	0	0	0	0	2	0	61
HU	0	0	0	0	0	0	0	0	0	4	11	100
IE	1	0	0	0	0	1	0	0	1	44	12	100
IT	0	0	0	0	0	0	0	0	0	6	6	100
LT	0	0	0	0	0	0	1	0	0	9	1	100
LU	0	0	0	0	0	0	0	0	0	10	7	54
LV	0	0	0	0	0	0	0	0	0	22	0	100
MT	0	1	0	0	1	0	0	0	0	12	2	30
NL	0	0	0	1	0	0	0	0	0	5	12	100
PL	0	0	0	0	0	0	0	0	0	3	1	100
PT	0	0	0	0	0	0	0	1	0	4	20	100
RO	2	0	0	0	0	0	0	0	0	7	3	100
SE	0	0	0	0	0	0	0	0	0	5	16	100
SI	0	0	0	0	0	0	0	1	0	17	0	100
SK	0	0	0	0	0	0	0	0	0	14	1	100
UK	0	0	0	0	0	0	0	1	0	4	12	100
Contracts	3	3	1	2	1	1	1	4	1	257	266	2621

Map of Europe and the EU countries.



(BBC, 2014)

National and international contracts

Contracting Authorities	Number of National Contracts	National Contracts (%)	Number of International Contracts	International Contracts (%)	Total Number	Total (%)
ES	85	98,8 %	1	1,2 %	86	100,0 %
DE	74	98,7 %	1	1,3 %	75	100,0 %
BG	98	98,0 %	2	2,0 %	100	100,0 %
PL	96	97,0 %	3	3,0 %	99	100,0 %
HR	59	96,7 %	2	3,3 %	61	100,0 %
FI	81	96,4 %	3	3,6 %	84	100,0 %
FR	68	95,8 %	3	4,2 %	71	100,0 %
GR	91	95,8 %	4	4,2 %	95	100,0 %
HU	85	95,5 %	4	4,5 %	89	100,0 %
UK	84	95,5 %	4	4,5 %	88	100,0 %
PT	76	95,0 %	4	5,0 %	80	100,0 %
NL	83	94,3 %	5	5,7 %	88	100,0 %
SE	79	94,0 %	5	6,0 %	84	100,0 %
IT	88	93,6 %	6	6,4 %	94	100,0 %
RO	90	92,8 %	7	7,2 %	97	100,0 %
DK	80	92,0 %	7	8,0 %	87	100,0 %
LT	90	90,9 %	9	9,1 %	99	100,0 %
CZ	82	89,1 %	10	10,9 %	92	100,0 %
EE	86	86,0 %	14	14,0 %	100	100,0 %
SK	85	85,9 %	14	14,1 %	99	100,0 %
AT	70	84,3 %	13	15,7 %	83	100,0 %
SI	83	83,0 %	17	17,0 %	100	100,0 %
BE	73	82,0 %	16	18,0 %	89	100,0 %
LU	37	78,7 %	10	21,3 %	47	100,0 %
LV	78	78,0 %	22	22,0 %	100	100,0 %
CY	37	71,2 %	15	28,8 %	52	100,0 %
MT	16	57,1 %	12	42,9 %	28	100,0 %
IE	44	50,0 %	44	50,0 %	88	100,0 %
Total	2098		257			
Total (%)		89,1 %		10,9 %		

Contracts in the EU, in Europe and outside

Contracting Authorities	Number of International Contracts	International Contracts (%)	Number of Contracts in the EU	Contracts in the EU (%)	Number of Contracts in Europe	Contracts in Europe (%)	Number of Contracts outside the EU and Europe	Contracts outside the EU and Europe (%)
BG	2	2,0 %	2	100,0 %	0	0,0 %	0	0,0 %
CZ	10	10,9 %	10	100,0 %	0	0,0 %	0	0,0 %
DK	7	8,0 %	7	100,0 %	0	0,0 %	0	0,0 %
EE	14	14,0 %	14	100,0 %	0	0,0 %	0	0,0 %
ES	1	1,2 %	1	100,0 %	0	0,0 %	0	0,0 %
FI	3	3,6 %	3	100,0 %	0	0,0 %	0	0,0 %
FR	3	4,2 %	3	100,0 %	0	0,0 %	0	0,0 %
GR	4	4,2 %	4	100,0 %	0	0,0 %	0	0,0 %
HU	4	4,5 %	4	100,0 %	0	0,0 %	0	0,0 %
IT	6	6,4 %	6	100,0 %	0	0,0 %	0	0,0 %
LU	10	21,3 %	10	100,0 %	0	0,0 %	0	0,0 %
PL	3	3,0 %	3	100,0 %	0	0,0 %	0	0,0 %
SE	5	6,0 %	5	100,0 %	0	0,0 %	0	0,0 %
SK	14	14,1 %	13	92,9 %	1	7,1 %	0	0,0 %
IE	44	50 %	40	90,9 %	1	2,3 %	3	6,8 %
LT	9	9,1 %	8	88,9 %	0	0,0 %	1	11,1 %
SI	17	17,0 %	15	88,2 %	1	5,9 %	1	5,9 %
BE	16	18,0 %	14	87,5 %	1	6,3 %	1	6,3 %
AT	13	15,6 %	11	84,6 %	2	15,4 %	0	0,0 %
MT	12	42,9 %	10	83,3 %	0	0,0 %	2	16,7 %
NL	5	5,7 %	4	80,0 %	0	0,0 %	1	20,0 %
PT	4	5,0 %	3	75,0 %	0	0,0 %	1	25,0 %
UK	4	4,5 %	3	75,0 %	0	0,0 %	1	25,0 %
LV	22	22,0 %	16	72,7 %	6	27,3 %	0	0,0 %
RO	7	7,2 %	5	71,4 %	0	0,0 %	2	28,6 %
CY	15	28,8 %	9	60,0 %	2	13,3 %	4	26,7 %
HR	2	3,3 %	1	50,0 %	1	50,0 %	0	0,0 %
DE	1	1,3 %	0	0,0 %	1	100,0 %	0	0,0 %
Total	257		224		16		17	
Total %		10,9 %		87,2 %		6,2 %		6,6 %

Contracts within and outside the clusters

Cultural Clusters	Contracting Authorities	Number of International Contracts	International Contracts (%)	Number of Contracts within Cultural Clusters	Contracts within Cultural Clusters (%)	Number of Contracts outside Cultural Clusters	Contracts outside Cultural Clusters (%)	
Anglo	IE	44	50 %	34	77,3 %	10	22,7 %	
	UK	4	4,5 %	3	75,0 %	1	25,0 %	
Total		48		37		11		
Total (%)					77,1 %			
East	BG	2	2,0 %	0	0,0 %	2	100,0 %	
	CY	15	28,8 %	6	40,0 %	9	60,0 %	
	CZ	10	10,9 %	7	70,0 %	3	30,0 %	
	EE	14	14,0 %	5	35,7 %	9	64,3 %	
	GR	4	4,2 %	0	0,0 %	4	100,0 %	
	HR	2	23,3 %	0	0,0 %	2	100,0 %	
	HU	4	4,5 %	3	75,0 %	1	25,0 %	
	LT	9	9,1 %	4	44,4 %	5	55,6 %	
	LV	22	22,0 %	8	36,4 %	14	63,6 %	
	PL	3	3,0 %	0	0,0 %	3	100,0 %	
	RO	7	7,2 %	0	0,0 %	7	100,0 %	
	SI	17	17,0 %	6	35,3 %	11	64,7 %	
	SK	14	14,1 %	9	64,3 %	5	35,7 %	
	Total		123		48		75	
	Total (%)					39,0 %		
	Germanic	AT	13	15,6 %	8	61,5 %	5	38,5 %
DE		1	1,3 %	0	0,0 %	1	100,0 %	
LU		10	21,3 %	7	70,0 %	3	30,0 %	
Total		24		15		9		
Total (%)					62,5 %			
Latin	BE	16	18,0 %	5	31,3 %	11	68,8 %	
	ES	1	1,2 %	1	100,0 %	0	0,0 %	
	FR	3	4,2 %	1	33,3 %	2	66,7 %	
	IT	6	6,4 %	1	16,7 %	5	83,3 %	
	MT	12	42,9 %	9	75,0 %	3	25,0 %	
	PT	4	5,0 %	2	50,0 %	2	50,0 %	
Total		42		19		23		
Total (%)					45,2 %			

(Continued)

Cultural Clusters	Contracting Authorities	Number of International Contracts	International Contracts (%)	Number of Contracts within Cultural Clusters	Contracts within Cultural Clusters (%)	Number of Contracts outside Cultural Clusters	Contracts outside Cultural Clusters (%)
Nordic	DK	7	8,0 %	1	14,3 %	6	85,7 %
	FI	3	3,6 %	3	100,0 %	0	0,0 %
	NL	5	5,7 %	0	0,0 %	5	100,0 %
	SE	5	6,0 %	2	40,0 %	3	60,0 %
Total		20		6		14	
Total (%)					30,0 %		
Total Contracts (%)					48,6 %		51,4 %

Contracts within and outside geographical proximity

Contracting Authorities	Number of International Contracts	International Contracts (%)	Number of International Contracts within Geo. Prox in the EU	International Contracts within Geo. Prox in the EU (%)	Number of International Contracts within Geo. Prox in Europe, outside the EU	International Contracts within Geo. Prox in Europe, outside the EU (%)	Number of International Contracts outside Geo. Prox	International Contracts outside Geo. Prox (%)
CZ	10	10,9 %	10	100,0 %	0	0,0 %	0	0,0 %
FI	3	3,6 %	3	100,0 %	0	0,0 %	0	0,0 %
IE	44	50 %	34	77,3 %	0	0,0 %	10	22,7 %
UK	4	4,5 %	3	75,0 %	0	0,0 %	1	25,0 %
LU	10	21,3 %	7	70,0 %	0	0,0 %	3	30,0 %
FR	3	4,2 %	2	66,7 %	0	0,0 %	1	33,3 %
PL	3	3,0 %	2	66,7 %	0	0,0 %	1	33,3 %
SK	14	14,1 %	9	64,3 %	0	0,0 %	5	35,7 %
AT	13	15,6 %	8	61,5 %	2	15,4 %	3	23,1 %
BE	16	18,0 %	8	50,0 %	0	0,0 %	8	50,0 %
MT	12	42,9 %	6	50,0 %	0	0,0 %	6	50,0 %
PT	4	5,0 %	2	50,0 %	0	0,0 %	2	50,0 %
LT	9	9,1 %	4	44,4 %	0	0,0 %	5	55,6 %
CY	15	28,8 %	6	40,0 %	0	0,0 %	9	60,0 %
SI	17	17,0 %	5	29,4 %	0	0,0 %	12	70,6 %
DK	7	8,0 %	2	28,6 %	0	0,0 %	5	71,4 %
NL	5	5,7 %	1	20,0 %	0	0,0 %	4	80,0 %
IT	6	6,4 %	1	16,7 %	0	0,0 %	5	83,3 %
LV	22	22,0 %	3	13,6 %	5	22,7 %	14	63,6 %
EE	14	14,0 %	1	7,1 %	1	7,1 %	12	85,7 %
BG	2	2,0 %	0	0,0 %	0	0,0 %	2	100,0 %
DE	1	1,3 %	0	0,0 %	0	0,0 %	1	100,0 %
ES	1	1,2 %	0	0,0 %	0	0,0 %	1	100,0 %
GR	4	4,2 %	0	0,0 %	0	0,0 %	4	100,0 %
HR	2	3,3 %	0	0,0 %	0	0,0 %	2	100,0 %
HU	4	4,5 %	0	0,0 %	0	0,0 %	4	100,0 %
RO	7	7,2 %	0	0,0 %	0	0,0 %	7	100,0 %
SE	5	6,0 %	0	0,0 %	0	0,0 %	5	100,0 %
Total	257		117		8		132	
Total (%)		10,9 %		45,5 %		3,1 %		51,4 %

Contracts within geographical proximity

	International contracts within the EU													
From/To	at	be	bg	cy	cz	de	dk	ee	es	fi	fr	gr	hr	hu
CZ	20,00 %				-	10,00 %								
FI										-				
IE														
UK														
LU		0 %				60,00 %					10,00 %			
FR		0 %				33,35 %			0 %		-			
PL					0 %	66,70 %								
SK	0 %				64,30 %									0 %
AT	-				0 %	61,50 %								0 %
PT									50,00 %					
MT														
BE		-				25,00 %					12,50 %			
LT														
CY				-								40,00 %		
SI	5,90 %												23,50 %	0 %
DK						14,30 %	-							
NL		0 %				20,00 %								
IT	16,70 %										0 %			
LV								9,10 %						
EE								-						
BG			-									0 %		
DE	0 %	0 %			0 %	-	0 %				0 %			
ES									-					
GR				0 %								-		
HU	0 %													-
HR													-	0 %
RO			0 %											0 %
SE							0 %			0 %				

(Continued)

	International contracts within the EU													
From/To	ie	it	lt	lu	lv	mt	nl	pl	pt	ro	se	si	sk	uk
CZ								60,00 %					10,00 %	
FI											100,00 %			
IE	-													77,30 %
UK	75,00 %													-
LU				-										
FR		33,35 %		0 %										
PL			0 %					-					0 %	
SK								0 %					-	
AT		0 %										0 %	0 %	
PT									-					
MT		50,00 %				-								
BE				0 %			12,50 %							
LT			-		44,40 %			0 %						
CY														
SI		0 %										-		
DK											14,30 %			
NL							-							
IT		-										0 %		
LV			4,50 %		-									
EE					7,10 %									
BG										0 %				
DE				0 %			0 %	0 %						
ES									0 %					
GR														
HU										0 %		0 %	0 %	
HR												0 %		
RO										-				
SE											-			

(Continued)

	Other countries in Europe				
From/To	by	ch	ru	sum EU	sum non-EU
CZ				100,00 %	0,00 %
FI			0 %	100,00 %	0,00 %
IE				77,30 %	0,00 %
UK				75,00 %	0,00 %
LU				70,00 %	0,00 %
FR		0 %		66,70 %	0,00 %
PL	0 %			66,70 %	0,00 %
SK				64,30 %	0,00 %
AT		15,40 %		61,50 %	15,40 %
PT				50,00 %	0,00 %
MT				50,00 %	0,00 %
BE				50,00 %	0,00 %
LT	0 %			44,40 %	0,00 %
CY				40,00 %	0,00 %
SI				29,40 %	0,00 %
DK				28,60 %	0,00 %
NL				20,00 %	0,00 %
IT		0 %		16,70 %	0,00 %
LV	9,10 %		13,60 %	13,60 %	22,70 %
EE			7,10 %	7,10 %	7,10 %
BG				0,00 %	0,00 %
DE		0 %		0,00 %	0,00 %
ES				0,00 %	0,00 %
GR				0,00 %	0,00 %
HU				0,00 %	0,00 %
HR				0,00 %	0,00 %
RO				0,00 %	0,00 %
SE				0,00 %	0,00 %

Cultural clusters and geographical proximity

Contracting Authorities	Number of International Contracts	International Contracts (%)	Number of Interanational Contracts within Cultural Clusters and Geo.Prox	International Contracts within Cultural Clusters and Geo. Prox (%)	Number of International Contracts outside Cultural Clusters and Geo. Prox	International Contracts outside Cultural Clusters and Geo. Prox (%)
IE	44	50 %	34	77,3 %	10	22,7 %
LV	22	22,0 %	12	54,5 %	10	45,5 %
BE	16	18,0 %	11	68,8 %	5	31,2 %
AT	13	15,6 %	10	76,9 %	3	23,1 %
CZ	10	10,9 %	10	100,0 %	0	0,0 %
MT	12	42,9 %	9	75,0 %	3	25,0 %
SK	14	14,1 %	9	64,3 %	5	35,7 %
LU	10	21,3 %	8	80,0 %	2	20,0 %
SI	17	17,0 %	7	41,2 %	10	58,8 %
CY	15	28,8 %	6	40,0 %	9	60,0 %
EE	14	14,0 %	6	42,9 %	8	57,1 %
LT	9	9,1 %	4	44,4 %	5	55,6 %
FI	3	3,6 %	3	100,0 %	0	0,0 %
HU	4	4,5 %	3	75,0 %	1	25,0 %
UK	4	4,5 %	3	75,0 %	1	25,0 %
DK	7	8,0 %	2	28,6 %	5	71,4 %
FR	3	4,2 %	2	66,7 %	1	33,3 %
IT	6	6,4 %	2	33,3 %	4	66,7 %
PL	3	3,0 %	2	66,7 %	1	33,3 %
PT	4	5,0 %	2	50,0 %	2	50,0 %
SE	5	6,0 %	2	40,0 %	3	60,0 %
ES	1	1,2 %	1	100,0 %	0	0,0 %
NL	5	5,7 %	1	20,0 %	4	80,0 %
BG	2	2,0 %	0	0,0 %	2	100,0 %
DE	1	1,3 %	0	0,0 %	1	100,0 %
GR	4	4,2 %	0	0,0 %	4	100,0 %
HR	2	3,3 %	0	0,0 %	2	100,0 %
RO	7	7,2 %	0	0,0 %	7	100,0 %
Total	257		149		108	
Total (%)		10,9 %		58,0 %		42,0 %