



**KTH Architecture and  
the Built Environment**

Dept of Real Estate and Construction Management  
Div of Building and Real Estate Economics

Master of Science Thesis no. 438

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# **Competition problems and market entry barriers for Swedish and international actors**

- A study of Public Procurements in the City of Stockholm Traffic  
Administration

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# Master of Science Thesis

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## Abstract

The City of Stockholm Traffic Administration faces problems in terms of low tender participation in two of its units, park & street maintenance and public works. Weak competition in public procurements is in general a very common problem affecting many public purchasers in Sweden, as a result large amount of tax payments are wasted due of inefficiency.

One reason for the low tender participation is high barriers of market entry. On account of these circumstances, an analysis was made in order to analyse the market entry barriers affecting the two activities, park & street maintenance and public works. Where park & street maintenance is concerned, the report aimed at finding approaches on how to attract larger number of tenderers in the sector. Regarding public work, the second focus, the aim was to distinguish all barriers of market entry affecting foreign construction companies.

The results of this paper are mainly based on the 26 conducted interviews which covered clients, contractors as well as other interest groups. Regarding the maintenance sector, one tenderer has until now been extremely dominant in Stockholm municipality, winning most of the tenders. At the same time, most maintenance companies are not competitive enough or don't have the ability to produce streets maintenance services. Interviewees mentioned numerous market barriers such the risks related to winter maintenance of streets in the central parts of Stockholm, short contract durations, poor client/contractor communication, too small contracts and the lack of storage locations.

As public works are concerned, this sector is mostly dominated by large Swedish companies. A survey covering the largest procurements in Traffic Administration, 2006 to 2008 showed that only one foreign company won a tender. According to the interviewees, the low participation can be related to the small Swedish market, lack of alternative partnering contracts, expensive construction materials, poor local knowledge, cultural differences and language problems. These factors create together huge barriers of market entry.

Papers in the field of competition and public procurements are slightly rare. However, due to the importance of this issue, this paper may serve as a foundation for further in depth studies in this field. The thesis may as well remind about the importance of foreign competition in the Swedish construction sector.

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# **1 Introduction**

## **1.1 Background**

Public procurements account for more than a third of the total public sector spending yearly. Consequently, public procurements should be dealt with, as efficiently as possible in order to secure competition among tenderers.

Public contracting entities in the construction sector have faced an increased drop in the number of tenderers in recent years. In 2006 the number of tenderers had decreased by 40 % as compared with year 2000 (Konkurrensverket 2007). According to the Swedish Construction Federation, the economic boom has been one of the reasons for the decline in this sector.

Lack of competition in public procurements is considered a fundamental issue affecting many different types of public institutions. One public institution affected by the lack of tenderers is the City of Stockholm Traffic Administration (Trafikkontoret). The department is responsible for the traffic and the urban environment of the city. It participates in various infrastructural projects, contributing to the planning of new communications as well as being involved in the designing of streets, squares, parks and quays. The Traffic Administration also holds the prime responsibility over issues such as sanitation, snow clearing, graffiti removal, street vegetation, street lightings and waste management.

The department purchases approximately SEK 1.7 billion worth of services every year, of which streets maintenance and public works makes up the largest share. As a result adequate competition among tenderers in these two areas is of high importance.

Regarding street maintenance, Stockholm municipality is characterized by a high market concentration in which one company, Stockholm Entreprenad is the most dominant contractor. Snow removal is considered the most complicated part in street maintenance since it requires substantial technical and financial resources. Low participation in tenders is worse in the central parts of the municipality, in which Stockholm Entreprenad has almost frequently been the sole tenderer. The market lacks a variety of SMEs as well as large companies such as Skanska and NCC.

Infrastructure and public works is another area in which competition is necessary. From an international aspect most tenderers in this sector are local Swedish companies and very few international companies are present. An increase in the number of foreign construction companies could boost the competition which could as a result cut the costs for the Traffic Administration.

In order to increase competition in the two sectors (street maintenance and public works), market competition forces such as market entry barriers should be uncovered and analysed. High barriers of entry prevent firms from entering the market; that includes both street maintenance companies as well as foreign construction companies.

## 1.2 Aim

The aim of this report is to find and analyze the various market entry barriers which affect the street maintenance sector as well as the public works sector. These barriers of entry keep tenderers away from public procurements as well as from the market in general. The report also aims at finding practical and theoretical competitive tools which could help eliminate the barriers.

The report is divided into two parts. The first part is focused on the streets & parks maintenance sector while the second part is related to the infrastructure and works sector. Market entry barriers will be studied in both cases, however the focus will be slightly different. In the first part (streets & parks maintenance), the focus will be on how to approach SMEs and large contractors to Stockholm while in the second part (the public works sector), the aim is to find the various barriers and hinders which keep international construction companies away from the Swedish and Stockholm construction market.

More specifically the following questions will be asked:

### *Focus: The streets & parks maintenance:*

- What market entry barriers exist in the municipality of Stockholm for the contractor producing streets & parks maintenance services?
- How can the market entry barriers be eliminated?
- What should the contracting entity or the client do in order to attract more tenderers in public procurements?

### *Focus: The infrastructure and public works sector:*

- How can more tenderers, especially international firms be attracted?
- What market entry barriers do foreign construction companies face when entering Sweden?

## 1.3 Methodology

The report is based on literature research and exploratory investigations. In order to find out the barriers of entry related to the market a large number of various contractors and people were interviewed.

In the first part related to streets & parks maintenance, 12 interviews were made with various contractors and clients, of which two of them were based in Oslo, Norway. By comparing the market condition and the level of competition in the neighbouring country new ideas and solutions could emerge. In addition, a number of SMEs and large firms in the Stockholm maintenance sector were interviewed. Some of them continuously submitted tenders to the Traffic Administration and some not, interviews were also conducted with contract holders.

***Interviewees related to the maintenance sector:***

1. Stockholm Entreprenad AB
2. Svensk Entreprenad i Mälardalen AB
3. Vägverket Produktion
4. ISS Landscaping AB (*ex. Mandresa*)
5. Liselott Lööf AB
6. Svensk Markservice AB
7. Skanska drift
8. NCC Construction AB
9. Samhall AB
10. Oslo municipality
11. Stockholm Traffic Administration
12. ISS Landscaping Oslo

***Interviewees related to the public works sector:***

1. Skanska AB
2. Bilfinger Berger AG
3. Vinci Construction S.A
4. Hochtief AG
5. Z blin Scandinavia AB
6. MT Højgaard A/S
7. YIT Construction Ltd
8. Lemminkäinen Oyj
9. Sveriges Byggindustrier
10. Vägverket
11. Banverket
12. Stockholm Business Region
13. German-Swedish Chamber of Commerce
14. Metze Bau GMBH

The dialogues were in general aimed at distinguishing the market entry barriers from the contractors or the supplier's point of view.

In the second part, namely the infrastructure and the public works sector, 15 companies were interviewed. The interviewees included presidents and project managers from both Swedish and foreign construction companies as well as various organisations such as the Swedish Construction Federation and the German-Swedish Chamber of Commerce. The aim was to uncover the obstacles and market entry barriers faced by foreign construction companies on a regular basis concerning the Swedish market today. The interviews also aimed at examining ways of increasing the number of tenderers in public procurements by stimulating both foreign companies as well as Swedish SMEs.

**The work was done in three different phases:**

**Phase 1:** Literature research was conducted in the areas of competitiveness, public procurement and streets & parks maintenance. In parallel, a survey and analysis was made on the accounts payable ledger as well as on the order directory of the City of Stockholm Traffic Administration. The investigation enabled a deeper insight on the level off competition in the



different divisions of the Stockholm Traffic Administration. Consequently, questions regarding the delimitations of the work were given at phase 1.

The following two phases focused on competition analysis of the two areas, streets- and parks maintenance and the infrastructure- and public works.

**Phase 2:** Analysis was made on procurement documents such as specifications and award letters in the second phase. In addition, interviews were made with some companies involved in the tenders as well as other companies in the market. As public works are concerned, a large number of the largest foreign companies in Sweden and in the neighbouring countries were included in the interviews.

**Phase 3:** The analytical and the discussion part of the report were made in this phase.

## **1.4 Delimitations**

As the maintenance sector is concerned, the report will exclude technical issues, legal issues in contracts as well as comparisons in prices.

In the infrastructure and public works part, the main focus will be market barriers for non Swedish turnkey contractors in the construction business. The areas out of scope are the smaller international firms linked to the production process, such as foreign suppliers of materials. Other delimitations include legal barriers and the issue related to foreign construction workers. An analysis of these mentioned issues would make the thesis too broad and as well as affecting the time limit.

## **1.5 Disposition**

### **Chapter 2**

Background, describing the Traffic Administration of Stockholm.

### **Chapter 3**

In this chapter the theories of competitiveness are outlined, to facilitate understanding and use in later chapters. This chapter is entirely based on Porters (1998) five competitive forces.

### **Chapter 4**

The process of public procurements is described step by step, mostly based on Swedish laws and regulations.

### **Chapter 5**

Competitiveness and public procurements are analyzed simultaneously by looking at their relationship. In addition to that, the study looks at a number of theories which describes competition issues as well as public procurements.

### **Chapter 6**

The market entry barriers related to the parks and street maintenance sector is described in this chapter. In addition the results of the interviews are mentioned in this chapter.

**Chapter 7**

The market entry barriers related to the parks and street maintenance along with the infrastructure and public works sector are described in this chapter. In addition the results of the interviews are to be found in this chapter.

**Chapter 8**

The results of chapter seven are discussed and analysed. By using the theories in chapter two, three and four, the practical results from the interviews are analyzed from a scientific point of view.

**Chapter 9**

The conclusion and the main results of the paper are listed in this chapter.

## 2 The Traffic Administration of Stockholm

### 2.1 Stockholm Municipality

#### The city council

The 101 member strong City Council is the highest decision making body in the city of Stockholm, acting as a parliament. The members are elected following general elections and as a prime duty they set up the goals and guidelines for the municipality. Ahead of any decision by the council, matters are usually processed by other boards and committees. The City Administrations and the different companies perform the actual job once decisions are passed by the Council.

#### The City Executive Board

The board is responsible for carrying out the decisions made by the City Council as well as expressing its opinion about the decisions. Apart of being an executive body it has other responsibilities over the financial administration and the long term development of the city.

#### Council of Mayors

This body comprises of eight vice-mayors selected by the City Council. Each vice major is head of an administrative division. There are as well four opposition vice mayors.

#### Administrations and companies

The administrations and the companies do the actual day to day jobs. They are headed by politicians who bear the same composition as the City Council. Some city activities are done by certain corporate enterprises which are headed by the Stockholm Stadshus AB.

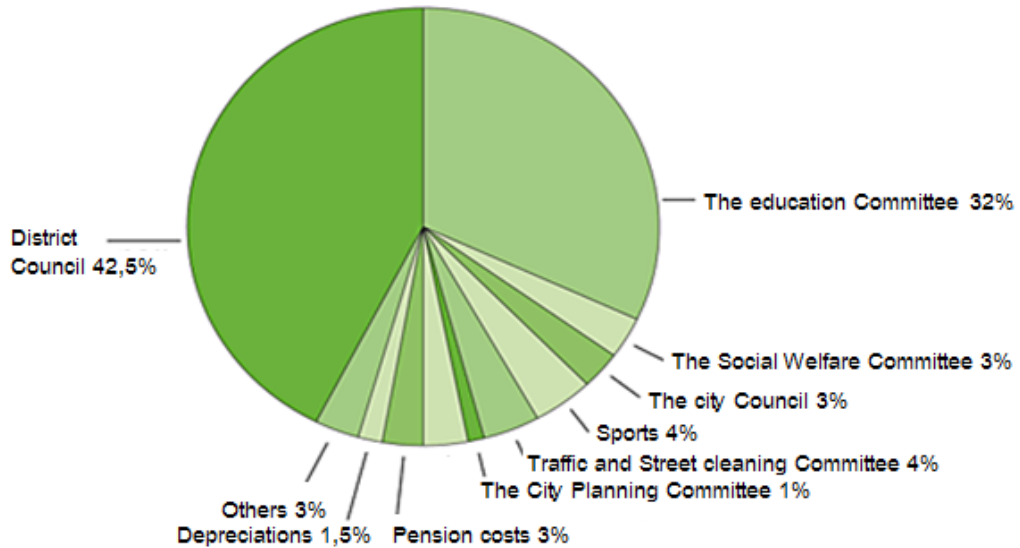


Figure 1 The political organization of Stockholm

(Stockholm Municipality)

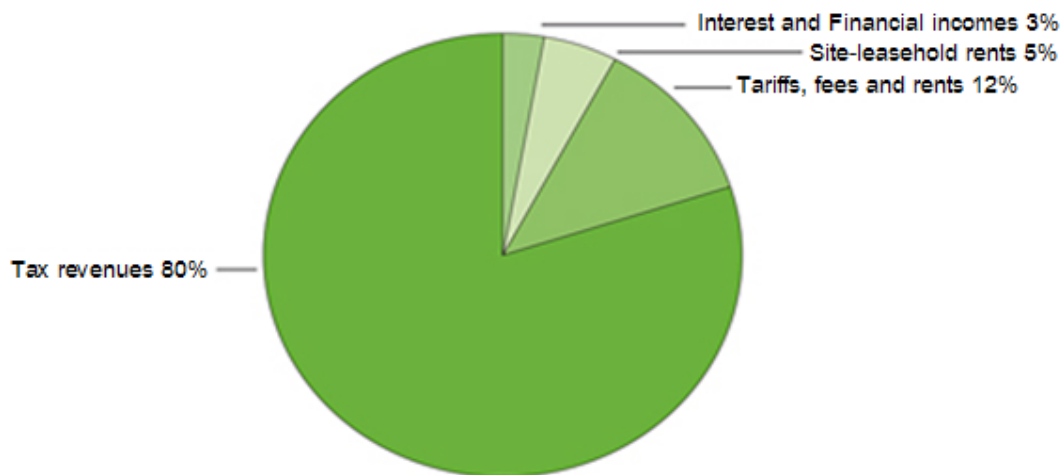
## Finance

Every year the City Council sets out the new budget for Stockholm which in the year of 2008 reached SEK 37.1 billion. After being approved by the City Council the budget money is allocated to different operations in the city. The largest share of 2008 year budget was allocated to the District Councils (42.5%) followed by the “Education Committee” (32%). The “Traffic and Street Cleaning Committee” undertakes four percent of the total annual city budget. The total revenue of the 2008 year budget is SEK 37.1 billion. The predominant parts of the revenues are raised by the municipal tax.



**Figure 2** The city of Stockholm's budget 2008 – costs

(Reproduced Stockholm municipality)



**Figure 3** City of Stockholm, budget 2008 – revenues

(Reproduced Stockholm municipality)

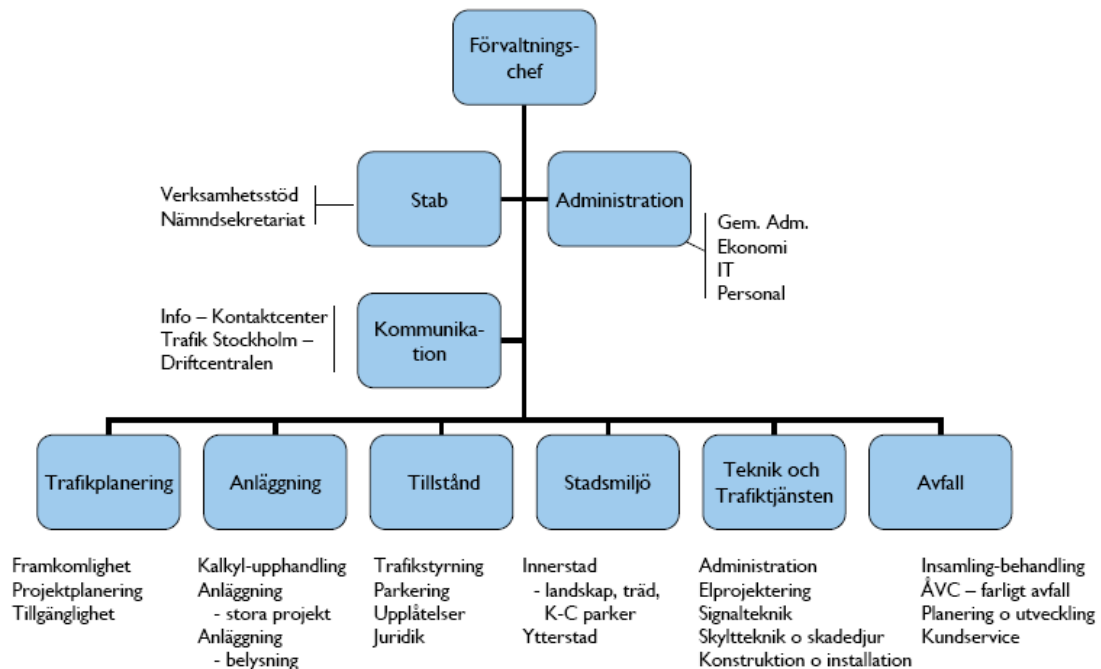
## 2.2 The City of Stockholm Traffic Administration

The City of Stockholm Traffic Administration is responsible for the safety, beauty and the cleanness of the city. The department deals with daily issues such as street cleaning, snow removal, graffiti removal and waste disposal. The department is also involved in a number of large infrastructural projects such as the “City line”, the “Northern link” and “Slussen”.

By creating short- and long-term plans for the city infrastructure, the Traffic Administration attempts to create a city that is safer and more accessible for its citizens, as a matter of fact the city has a target to become the most accessible city in the world by 2010.

As an executive organization, the City of Stockholm Traffic Administration carries out the orders made by the “Traffic and Street cleaning Committee”. As a result, it bears the responsibility for 800 bridges, 153 miles of streets, 211 miles of sidewalks and cycle paths, 1 million traffic signs, 550 traffic construction projects, 1200 parking ticket machines, five large parks, 20000 trees, 93000 lamp poles, 223 stair ways, 600 revetments and 6700 meters of tunnels.

### Departmental structure



**Figure 4** Departmental structure of the Stockholm Traffic Administration. The departments mentioned in the paper are: Trafikplanering (Traffic Planning), Anläggning (Infrastructure and Public Works), Stadsmiljö (City Environment) and Avfall (Waste Management).

(Stockholm Municipality)

**Traffic planning**

By doing various research and analysis on the city's traffic system the Traffic planning department undertakes the overall responsibility on matters concerning the traffic situation of the city. Decreased traffic congestions, increased roads accessibility along with improved safety belong to some of its core activities. The department also deals with the environmental impacts as a result of the city traffic, as an example the "Stockholm Mobility" project aims at improving and raising the efficiency of mobility and the transports of the city.

**Public works and Infrastructure**

This department executes projects in all kinds of fields such as management of investments projects, procurements advice and management of the cities lightning system. The department carries out consulting projects in the fields of construction management, city planning and public street lightings. It invests in roads, streets and various squares and is involved in large infrastructural projects such as the Nord-Syd axeln, Norra Länken, E18, Citybanan and many more.

**City environment**

This department is responsible for the planning, investments and management of the city's parks and street network. Snow removal, roads sweeping, surface maintenance on roads and squares as well as street-, square- and jetty- design are some of the departments main responsibilities. Other tasks related to this department are the combat against the Dutch elm disease in parks and other areas along with maintenance of snow dumps and sand silos.

**Waste management**

The department's responsibility covers areas such as procurements, R&D and waste management. The processing of domestic waste, management of recycling areas, management of hazardous waste and organization of mobile refuse handling points belong to the important activities of the department.

### 3 Competitiveness

Every firm has a competitive strategy in order to survive in the market, either explicit or implicit. According to Porter (1980), an explicit competitive strategy is beneficial for all companies aiming to improve their competitiveness. Competition in an industry can be described through five basic forces. Adding the competitive forces together determines the ultimate competitive market atmosphere. In the long run this is a measuring tool for the rate of return on invested capital.



**Figure 5** Porter 5 forces analysis

(Wikipedia)

As a business unit in a free market, it's fundamental to find a position from which the firm is able to adopt a defensive policy against these forces or somehow influence the forces in its own favour.

Competition tends to force down the rate of return on investments, those investors that cannot accept rates below the free market rates will soon quit the market. However, rates higher than the free market rates tend to fuel the inflow of capital, which means new firm entries and additional investments.

## **3.1 The threat of new entrants**

When companies enter a new market, they face various difficulties. One important characteristic of the competitive forces are the barriers for entering a market. The barriers that exist for entering a market combined with what reactions existing competitors will have make together the threat of entry which exists. Entry is low if barriers are high or if an entering firm faces hard retaliation from the existing competitors.

### **3.1.1 Entry barriers**

According to Porter (1998), barriers to entry are considered one of the five competitive forces affecting the market competition. These hindrances lie in the path of a company which wants to enter a given market. The following factors are sources of barriers to entry.

#### ***Economies of scale***

Large companies subject to economies of scale prevent new entries by giving new entrant two choices, either the entrant must enter with full force/large scale and risk hard retaliation from existing firms or entrants may come in with small scale and agree to take a less profitable small market share.

The decline of a products unit price is the issue most often referred to when describing the economics of scale. Factors like manufacturing, purchasing, R&D, marketing, service network, sale force utilization and distribution are all seen as volumes which are able to increase per period.

If a company has several units it could share its different operations and be able to obtain economics similar to those of scale. Sharing operations are mainly effective if there are joint costs among the different units, for instance a passenger aircraft is able to carry cargo freight regardless of that number of passengers in the cabin. By carrying both it may have better economical advantage over competing airlines that only transport passengers or cargo separately. Different business units can as well share intangible assets like know-how which will result in a scale type economy.

Companies can reach economics of scale if they are subject to vertical integration. Larger companies have usually the

#### ***Product differentiation***

Some firms have established strong brands and customer loyalties originating from past advertising, good customer services and well known quality etc. This creates a barrier to entry for companies wanting to enter a market.

#### ***Capital requirements***

When entering a new market, some costs should be taken into consideration. As a new unknown firm, money should be spent on advertisement, R&D, customer credit, inventory and covering up start-up losses. This could become a barrier for the entry firm.

#### ***Switching costs***

As a client switches from one supplier's product to another, it usually means one-time costs. These costs and time spent for retraining the employees, qualifying the new suppliers, getting technical assistance from the new suppliers are all switching costs resulting which come as a result of switching suppliers. Other switching costs are the need for reliance on seller engineering help, product redesign and psychological costs. This creates a barrier for market entry.



### ***Access to distribution channels***

Established companies have access to the logical distribution channels in the market. A new entrant must find these channels in order to distribute its services, sometimes by persuading the market by the help of price breaks and advertisements. The more established players in the market, the harder it will be for a new company to enter it. Sometimes, too high entry barriers results in the creation of entirely new distribution channels made by the entrants.

### ***Cost disadvantages independent of scale***

Firms in a market may have competitive advantages regardless of their size or their economics of scale. The following are all factors regarded as sources for entry barriers.

- Patents or product know-how,
- Favourable access to raw materials,
- Offices or factories at favourable locations,
- Access to governmental subsidies
- More experienced, according to the classical learning and experience curve, workers in a company improve their methods by time and become more efficient.

### ***Government policies***

The government can limit access to raw materials; it can introduce fees for polluting companies or introduce other regulations which may decrease the revenues and prevent the entry of new companies into the market.

### **3.1.2 Retaliation from the market**

As mentioned earlier, the threat of entry is made of a combination of the entry barriers and the expected retaliation from the market. The following conditions indicate whether there will be a tough retaliation or not from the market:

- The history of retaliation against incoming companies
- The market will fight back if it hosts strong companies with enough resources, unused borrowing capacity, high production capacity, many distribution channels and costumers
- The market hosts many established firms with great commitment to the industry
- Slow economical growth makes the market less absorbable to new firms and existing firms more aggressive in protecting their shrinking market.

### **3.1.3 Entry deterring price**

The entry deterring price balances the two important factors, expected costs for entering a market and the potential rewards for entering it. Having a market price slightly above the entry deterring price means an entering firm will make profit by entering that market. However, if the situation is the opposite, the high costs will keep entering firms away from the market.

## 3.2 Rivalry among existing firms

In a competitive market, firms feel the pressure to retaliate against competitors because they are affected by the others strategic moves. Firms in a market are mutually dependent on each other. Price cuts by one firm are usually quickly responded by competitors; however, this (escalating moves and countermoves) could sometimes have tough consequences for the market since it creates low profits which may chase companies away from the market. On the other hand, competition usually increases demand and encourages product differentiation. Porter (1980) defined the intensity of rivalry by the following factors:

### *Numerous or equally balanced competitors*

The fact that numerous or few firms are active in the market has large implications on the rivalry. Many competing firms often create a market where competitive moves by one company may not be visible by other rivals. On the other hand, few competing firms increase the risk of price leadership.

### *Slow industry growth*

A slow economy and low demand paves the way for increased market share competition; expanding companies need to compete over a smaller share of profits.

### *High fixed- and storage-costs*

Storage is expensive and many often companies are tempted to cut down their prices in order to increase sales.

### *Lack of differentiation or switching costs*

Commodities or other comparing products are more exposed by competition due to their lack of differentiation. On the contrary, product differentiation or non commodity products are more immune against the threats of competition.

### *Capacity additions during large growth*

Large increases in production may cut the prices and increase rivalry among competitors.

### *Diverse competitors*

If the competitors are very diverse in terms of size, nationality and commitment etc., a lot of different personalities, cultures, strategies and goals will exist which usually have an effect on the rivalry in the market. Since the competitors are so different, there will be communication problems and competitors will have a hard time reading each other's business intentions resulting in business cultural differences. The following factors may add diversity into the market:

- Foreign firms usually have an effect on the market diversity since they have different goals and expectations from the market.
- Small firms entering a market dominated by large companies are able to add diversity into a market since they are usually pleased with a lower rate of return. Large firms may find this unacceptable because profits may decrease.
- When a large powerful company dumps prices in a market dominated by smaller firms it adds diversity into the market

### ***High strategic stakes***

If certain companies have very ambitious plans, this could destabilize the market and increase the competition.

### ***High exit barriers***

As well as entry barriers, exit barriers do affect the competition in the market. If a company has large major investments in specialized assets (low liquidity, high cost of transfer) it will face difficulties if leaving the market. However, fixed costs like labour agreements and resettlement cost are other barriers preventing the abandoning of the market.

Other issues aggravating market exits are the risks of losing distribution channels and strategic relations.

According to Porter, entry and exit barriers can be summarized by the following table. It describes the different cases of competition within a market when entry and exit barriers change.

*Table 1 Entry and exit barriers*

		<i>Exit Barrier</i>	
		Low	High
<i>Entry Barrier</i>	Low	Low, stable returns	Low, risky returns
	High	High, stable returns	High, risky returns

(Porter 1998)

- Entry barriers high and the exit barriers low are considered the dream case for the industry. As a result, the risk of increased competition due to entering companies reduces and profits increase. Low exit barriers steers unsuccessful companies out of the market.
- When both entry and exit barriers are high, profit potentials are high, however the risks increase as well.
- The worst case takes place when entry barriers are low and exit barriers high. An industry can be in this uncomfortable position if banks and suppliers willingly finance entry but once inside the market, the company faces large fixed financial costs.

### 3.3 Bargaining power of buyers

Buyers usually strive for forcing down prices, bargaining for higher quality and more services. Buyers usually tend to play different competitors against each other, all this at the expense of profitability in the market.

The bargaining power of a buyer is defined by the following factors:

- If a large portion of a supplier's sales is purchased by a certain buyer, it raises the importance and the bargaining power of the buyer.
- If a large amount of the buyers costs is used for purchases, the buyer tend to be more selective when spending but If a small amount of the buyers costs is used for purchases, the buyer tend to be less selective and sensitive on the price.
- If producers/suppliers make undifferentiated products like commodities, the buyer can more easily play the suppliers against each other.
- If the buyer doesn't face any switching cost, it will turn more powerful as a buyer. Switching costs locks buyers to a particular supplier resulting in less buyer bargaining power.
- Buyers with low profits, push the prices down since they become prices sensitive.
- A buyer using backward integration is able to use the threatening tool of self manufacturing. For instance a company may buy some of its materials from outside suppliers and produce a certain volume in-house; this combination puts the buyer on a strong bargaining position. This method gives the purchaser better and deeper understanding on how market prices are at that moment.
- The buyer gets the most favourable prices if it has a deep knowledge about the market. Factors like demand, market prices and supplier costs are valuable information for buyers.

### 3.4 Bargaining power of suppliers

According to Porter (1980), buyer selection is a very important issue. "*A company can improve its competitive position by finding buyers who possesses the least threat and influence on its buyers.*" (Porter: 26)

If a supplier wants to exercise its bargaining power, it usually raises the price while offering poorer quality to the costumer. The suppliers can raise their bargaining power if the following conditions are met; often these conditions mirror those factors that make buyers powerful.

- If the suppliers are few and more concentrated in one field compared to their customers, they can posses more power and influence on their on the buyers. If suppliers focus their sales on more fragmented buyers they can easily exert their power on them.
- If a supplier is not obliges to compete with other firms it develops a strong bargaining position.
- If certain customers are not considered important, supplier can easily raise prices, offer lower quality and demonstrate power.
- If the suppliers products are an important part of the buyers manufacturing process, the bargaining power of the supplier increases. If the input (the product purchased by the buyer) is not storable, the bargaining power of the supplier becomes even more evident.
- If the supplier's products are differentiated or it creates switching costs for the buyer, the bargaining power increases.

- When suppliers pose the threat of forward integration, they increase their bargaining power.

The bargaining power of suppliers and buyers is not always connected to the mentioned factors. Apart of those, governmental role and laws at times limits how suppliers and buyers can exercise their power.

### **3.5 Pressure from substitute products**

Substitute products are created due to the increase of competition in a market. Substitutes decrease or limit profitability in a business, at least in the beginning. A substitute product is an alternative product with the same function as a product already produced in an industry but which generates more profit. An example of a substitute product is online travel agencies which do the same job as traditional travel agencies but maybe offer a lower prices. If traditional travel agencies want to survive, they may have to consider offer online services as well.

### **3.6 Strategies of buyers and suppliers**

#### **3.6.1 How do suppliers select their buyers?**

The type of buyers a firm usually sells to strongly affect the growth rate of the firm. Suppliers tend to choose those buyers that have the least bargaining power, which means, selling to the most favourable costumers.

A supplier looks at the following criteria's when selecting it's costumers:

#### ***The buyer's purchasing needs versus capabilities***

It is quite self-evident that the customer's purchasing needs should be matched with the capabilities of the supplier. If this equation works, the supplier is able to offer more differentiated products in relation to other competitors as well as decrease the cost of serving the buyers relative to other competitors.

#### ***The buyer's future growth potential***

A supplier may look at its buyer's growth potential since it may affect its own future market growth. Conditions such as market the growth rates, growth rates of the customer's primary market and the performance of the customer in terms of its market shares are factors that could be analyzed.

#### ***The buyer's structural position***

- Choosing customers that have small purchasing volumes relative to the seller's sales.
- Focus on costumers who lack qualified alternative supplier sources.
- Choosing buyers with high shopping, transactions or negotiating costs. Due to the high cost of changing suppliers, these buyers usually stick to the same suppliers.
- Selecting buyers who are in a poor position to use backward integration. InvestorWorld.com describes integration as;

*“Acquiring ownership of one's supply chain, usually in the hope of reducing supplier power and thus reducing input costs.” (Investorwords.com)*

- Select firms with fixed costs such as switching suppliers

### **3.6.2 Price sensitivity of buyers**

The price sensitivity of buyers is an important factor when choosing customers. Buyers tend to be less sensitive on the price if:

- The total cost of a product is small relative to the purchasing budget of the buyer. If the item is a low cost product, the benefits of bargaining are usually low.
- If the buyer has high expectations on the quality of the products, it will become less price sensitive. The buyer is as a rule prepared to pay more in order to avoid added costs due to potential quality problems.
- If a buyer wants custom designed services or products, they will obviously become less price sensitive and even inclined to pay extra for it. The worst case scenario for a seller is when a powerful buyer demands low prices and custom designed products at the same time.
- If the buyer is poorly informed and updated on the markets, it will not be able to perform an efficient bargaining.
- The price sensitivity is as well related to the actual person doing the purchasing. If the purchase is made by a purchasing agent seeking maximum cost saving up against compensations, bargaining will naturally be on the top of his priority list. However, if purchasing is done by a party in the hunt for longevity, he will be less sensitive on the issue of money.
- Large companies do not necessarily need to be price sensitive. In the other way, large companies are usually willing to pay extra and sign deals with specific suppliers in order to make sure the production will flow. A small company may not have the same financial capabilities.

### **3.6.3 How do buyers select their suppliers?**

A buyer should consider some important factors when attracting its suppliers. In the same way as buyer selection, the right suppliers may determine a buyer's future economical growth. There are some key issues worth considering when choosing suppliers.

#### ***The supplier pool should have stability and possess competence***

It is desirable to have suppliers who have ambitions to maintain and improve their quality. This will help improve the buyer's own competitiveness in the market since it could use higher quality products. Having good suppliers means lowering the risk of changing suppliers, hence avoiding switching costs.

#### ***The buyer should seek optimal vertical integration or use tapered integration***

How much influence a firm has on its supply chain is crucial when seeking bargaining power. With vertical integration a company takes control over all stages of its production, from acquisition of raw material to retailing of the final product ([www.investorwords.com](http://www.investorwords.com)). In tapered integration a company produces some volumes of a product in-house while the rest is purchased from outside.

#### ***Allocating the firms purchases among skilled suppliers***

This can be done by focusing on factors that determine the bargaining power of suppliers, trying to neutralize these. It is advisedly not to do trade in businesses where suppliers are

concentrated, avoid customized services, buy differentiated products and be aware of vertical integration.

***Create leverage among its chosen suppliers***

As a buyer it is sensible to spread the purchasing by buying items from alternative suppliers as a way of improving the firms bargaining position. However as Porter describing it, the buyer should consider the following, “*the business given to each individual supplier must be large enough to cause the supplier concern over losing it*” (Porter 1980, p124).

***Avoid switching costs***

If the buyer becomes too dependent on engineering help and training from the supplier or if the buyer receives too much customized service from the suppliers, the buyer automatically creates switching costs.

***Help qualify alternate sources***

As a buyer it may be smart to encourage alternative suppliers to enter the business. This can be done by travelling overseas and persuade foreign firms to come or helping new suppliers reduce their cost in order to be qualified.

***Promote standardization***

By promoting standardization, the buyer is able to reduce product differentiation among its suppliers and increase its bargaining power.

### **3.7 Global competition**

Global competition increases the number of companies in a market leading to lower prices and better bargaining power for costumers. Penetrating a market as an international company can be a lucrative business. The reason behind global competition is explained by the following.

- Comparative advantage, some companies or counties have considerable leads in terms of factor costs or factor quality. They are able to export to and provide their services to other markets because of their strong position.
- Some economies of scale extend beyond the national borders and this may create a competitive position. A company is able to have centralized production and global distribution on its products.
- Selling the same product in many countries means increased experience. The cumulative volume per product is larger if the product is sold in many different countries resulting in higher profits.
- Global companies can achieve economies of scale in the field of transportation. Companies are able to use more cost efficient transport systems in order to distribute their products.
- The economies of scale can as well be implemented in marketing. Since the firm is global, it can use knowledge in marketing from one market and use it with no extra costs in another market.
- Global companies can chive economies of scale when purchasing various materials. Large international presence enables them to find the cheapest suppliers from all over the world. One example can be when companies are directly engaged in raw material exploitation.

- Having a global presence may give a company certain good reputation and trustworthiness.
- An important factor of economies of scale is fact that a company is able to move its different production units, services or crews from one place to another. Hence a company can invest more money without being locked to one specific geographical location.

### **3.7.1 Barriers to global competition**

- Some businesses with products like prefabricated concrete, hazardous chemicals and fertilizers have huge costs if wanting to transport these items. This means that the products should be produced locally instead.
- Different markets need different products in order to suite the domestic needs. This can sometime be a barrier for global companies.
- Each country has its own distribution channels. If there are many established distributors in a market, it is difficult to get access trough these channels since the competition is tough. If there are few channels in the market handling large volumes of trade it may be easier to gain access to the market.
- Large need for direct sales force is a barrier for entering a national market, for instance medical companies need to invest large amounts of money in detailing the doctors.
- Some businesses require local services and repair. This complicates for international companies aiming to compete with already established local firms.
- Large distances can result in longer lead time making it difficult for international trade
- When a foreign firm enters a market it may face difficulties with complex price performance tradeoffs among local producers. In such cases foreign companies need to become more differentiated in terms of product range and offer more competitive products.
- Marketing the products in a local market as an international company needs a lot of skills and money. As an international firm it is crucial to know the market and be able to compete with local companies.
- Governmental barriers
  - Tariffs and duties
  - Quotas
  - Public procurements where the government prefers to do business with local manufacturers, quasi-government bodies such as the defence industry
  - Favoured tax treatment on local firms, governmental firmness on local R&D, locally produced products
  - Labour policies



### 3.8 Vertical integration

Vertical integration takes place when a company obtains control over all parts of its supply chain, the production, the distribution and the sales. Many firms believe it is less risky, cheaper and easier to do most of the job in-house, not using outside suppliers. There are many different type of integration; all have their own benefits and disadvantages.

#### *Advantages of vertical integration*

When a firm decides to produce a product in-house through backward integration, it needs to take under consideration the benefits of it for the company. If a company considers implementing backward integration, it needs to look at its current volume of purchases. If this volume is large enough to support a production required for a scale like economy, backward integration is beneficial.

#### *Benefits of integration*

- *Economies of combined operation*, some procedures are operationally distinct and can be done in a joint manufacturing process. Integration may help this process which often results in less number of steps in the manufacturing procedures, reduced handling costs, lower transportation costs and lower costs in general.
- *Economies of internal control and coordination*, if a firm is integrated, costs of scheduling and coordination's may decrease. Integration also makes it easier for companies to respond on cases of emergency; the reason steadier supply of raw material and smoother deliveries, among others.
- *Economies of information*, having internal production means faster and more accurate information how market prices are. This means spending less time on market research.
- *Economies of avoiding the market*, money can be saved on less negotiating and transactions costs. Integration means there is no need for a sales force, marketing or a purchasing department.
- *Economies of stable relationships*, the company may develop more efficiently if the purchasing and the selling entities of the company have a stable relationship. The units handling certain parts of a supply chain can adjust their products to the requirements of other units in the company, in such a way efficiency is developed.
- *Gain understanding of other technologies*, by handling more processes internally, a company is able to achieve know-how on diverse skills.

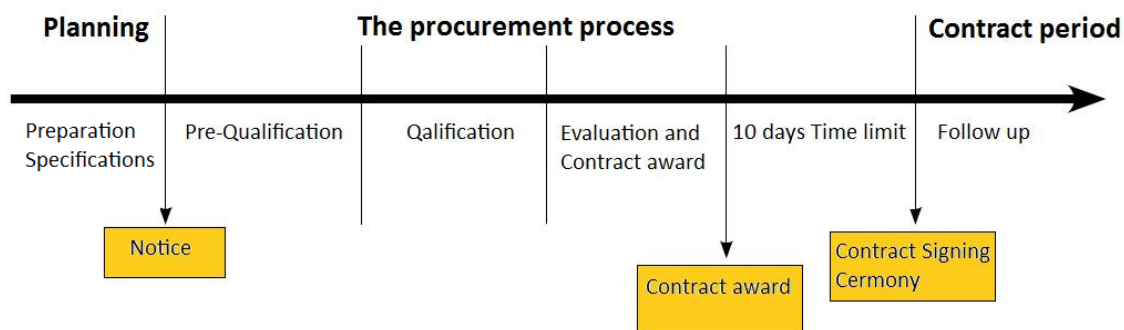
## 4 Public Procurements

More than 30 percent of the total public costs in Sweden are related to public purchasing. Consequently, tax payer's value for money can only be reached by creating efficiency in procurements and accomplishing adequate competition among companies.

Public procurements are regulated by the Swedish law and the law (LOU) includes municipalities, county councils, governmental agencies as well as some publicly owned companies.

### 4.1 The Procurement Process

A public procurement process begins by analyzing the needs and the budget that is available to fulfil the needs. Later the client calculates the value of the project, in order to see if it is above or below the values of thresholds. Depending on the value, the procurement procedures are different. The stages of the process are illustrated below:



**Figure 6** The stages of the procurement process

(Source: The Swedish Competition Authority)

### 4.2 The EU treaty principles

According to the Swedish Competition Authority, public procurements should be done with respect to the following principles:

**”The principle of non-discrimination** prohibits all discrimination based on nationality. No contracting entity may, for example, give preference to a local company simply because it is located in the municipality.

According to **the principle of equal treatment** all suppliers must be treated equally. All suppliers involved in a procurement procedure must, for example, be given the same information at the same time.

According to **the principle of transparency** the procurement process must be characterized by predictability and openness. In order to ensure equal conditions for

tenderers the contract document has to be clear and unambiguous and contain all the requirements made of the items to be procured.

**The principle of proportionality** states that qualification requirements and requirements regarding the subject matter of the contract must have a natural relation to the supplies, services or works which are being procured and not be disproportionate.

**The principle of mutual recognition** means among other things that documents and certificates issued by the appropriate authorities in a Member State must be accepted in the other Member States.”

*(Source: The Swedish Competition Authority)*

***There are some cases where exceptions are made regarding the Act:***

- International agreements made among states for common projects
- Agreements concerning deployment of military personnel
- Procurement processes agreed by international organizations
- Procurements covering sensitive projects concerning national security
- Procurements covering military equipments and services

## **4.3 Essentials in all public procurements**

### **4.3.1 The specifications**

The tenders are shaped according to the specification which works as a foundation for the procurement process. The specification needs to clearly describe the object that is being purchased. The specification includes the following parts:

1. Supplier requirement (economy, technical competence) in open and simplifies procedures
2. Task description
3. Method of assessment (lowest price or economically most favourable)
4. Conditions relating to the contract ( during the contract time)
5. Administrative information for the procurement (the process, time limits and validity periods)

### **4.3.2 The notice**

In general, all tenders should be advertised. However the advertisement is made differently depending on the procedures. The choice of procedure is done in accordance to the Procurement Act, LOU. Direct tenders are not advertisement.

### **4.3.3 Communication**

The contracting entity can freely chose whether it wants to receive the different documents in paper form, fax or by e-mail. Tenders can also be done by telephone.

#### 4.3.4 Evaluation of tenders

If the tender is submitted late it will be disqualified. The qualification part includes the following phases:

##### *Some factors may result in disqualification*

A tenderer could be disqualified if it has a crime record

##### *Qualification process*

The tenderers qualifications are reviewed. The decision is based on technical skills and experience as well as professional expertise.

##### *Contract award*

The decision is based either on the lowest price or economical advantages.

#### 4.3.5 Documentation

The contracting entity is required to documentate and archive a large number of documents. According to the law the contract notice specifications, distributor list, opening protocols, call for tenders, tenders, communication notes, assessment protocols and all the documents showing how the decisions were taken, should be archived.

### 4.4 Choice of procurement procedure

#### 4.4.1 Threshold values

The law includes all forms of acquisitions, both above and below the so called “Threshold Values”, however the two cases are regulated differently by the act. The act is based mainly on EC directives if the amounts of the procurements are above the threshold level and based on national regulations if the amounts are below the level. The threshold value itself is different depending on the type of purchase as well as the purchaser’s nature.

*Table 2 Values of threshold in public procurements*

Works	EUR 5 150 000	SEK 47 778 869
Supplies and services		
Utilities	EUR 412 000	SEK 3 822 309
Public authorities	EUR 133 000	SEK 1 233 901
Other public sector contracting authorities	EUR 206 000	SEK 1 911 155
Prior Information Notices	The same value	

(Swedish Competition authority)

#### **4.4.2 A-and B-services**

Services are divided into A or B- categories. According to the Procurement Act, A-services are more suitable for international competition while B-services are considered more domestically tied. A-services procurements above the values of thresholds require a considerable larger amount of formal procedures regarding issues like procurement notices and time limits.

##### **The following services are included in the A-category:**

Depending on the value of a contract, A-category services are purchased through open-, restricted- (above and below thresholds) or simplified- procedures. Services included in this category are maintenance of motor vehicles and machinery, data services, market surveys, consulting services for administration, architectural services, publicity services, real estate management including cleaning and running maintenance, publishing services, garbage disposal services et al.

##### **The following services are included in the B-category:**

Security and guard services, education, healthcare and social services, cultural services, leisure and sports et al. B-Services, irrespective of the values of the contracts are acquired both below and above the threshold values, however there is no need for specification, published in the official journal of the European Union, TED.

#### **4.4.3 Type of procedures above the values of thresholds**

##### ***Open***

- The procurement should be advertised in the official journal of the EU
- Standards should be mentioned in order to define and state the requirements of the project
- A written contract document (the documentation on which the procurement is based)
- Regulated minimum time for submitting a proposal; 52 days for open procurements and 40 days for selective procurements
- Negotiation not allowed
- The results of the procurement should be announced in TED (Tenders Electronic Daily)

##### ***Restricted***

- In restricted procurements, only chosen companies are advertised. Those qualified for the job are then able to send their proposals. This is common among contractors in the construction business and certain complicated services.

##### ***Negotiated***

- The contracting entity receives tenders from a number of invited suppliers. Later, the contracting entity begins negotiations with one or a number of these tenderers.

#### **4.4.4 Type of procedures below the values of thresholds and in B-category services regardless of value**

Advertising is mandatory even for projects below the threshold values.

##### ***Simplified***

- Simplified procedures (förenklad upphandling) are used for the purchasing of supplies, works and services below the values of thresholds. This procurement procedure is as well used in B-services regardless of the amount and non-confidential military equipment. Tenderers submit tenders and the contracting entity begins negotiations with one or a number of these tenderers.

##### ***Restricted***

- The contracting entity receives tenders from number of invited suppliers (urvals upphandling).

##### ***Negotiated***

- The contracting entity does not call for any tenders, which means that the customer can directly do purchasing from its supplier's without any procurement process. Negotiated or direct purchasing (direkt upphandling) is allowed only if the contract value is low or if special reasons exist.

## **5 Competition in public procurements**

### **5.1 Level of competition in the Swedish public sector**

Public purchasing is worth SEK 400 billion per year. If this sector works efficiently, huge amount of money could be saved. Many industries in Sweden are characterized by a high concentration and the barriers for entry are usually high. In some industries, the four largest enterprises account for more than 90 per cent of the total industry turnover. This could for instance be seen in the Swedish construction sector. According to the Swedish Competition Authority, the level of competition in the public sector is very poor. Procurers receive fewer and fewer tenders in a growing number of cases.

Many of the mentioned competition problems could be related to the economic boom in recent years, however not all of them. Sweden is a country with a number of very large companies and relatively few middle sized firms. According to the Swedish Competition Authority, one reason is the high barriers for entering the market, which is a result of a tendency to use lowest prices as a selection criterion, furthermore issues regarding the complexity in procurement processes, have a negative impact on the competition.

### **5.2 Research on Public Purchasing**

There are relatively few researches on public procurements competition compared to other economical topics. According to Copenhagen Economics most research in this fields are related to problems with scale-competition.

A study by Linthorst and Telgren (2006) showed the pros and cons related to the usage of many suppliers in public procurements. The positive sides were lower costs due to increased competition, less dependency on suppliers, lower risk of supplier disruptions and a broad access to the market. The negative sides were higher administrative costs, less loyalty among suppliers and fewer benefits of scale economies.

Loader (2007) examined whether procurements could be used for supporting small and medium sized businesses. The findings of the paper suggested that costumers first of all seek maximum value for money but at the same time, are keen to do business with SMEs. Since these two objectives are contradictory, small and medium sized companies face difficulties in winning tenders on the basis of value for money, since this factor is very much related to cost efficiency and quality. According to the author, focusing only on cost and efficiency will only enable large companies to access the market, but if requirements go beyond these factors more SMEs are likely to join the procurement race. Smaller firms encompass strengths such as flexibility and openness. Loader (2007) mentioned five approaches by Bannock and Peacock which could improve the promotion of SMEs.

*Table 3 Bannock and Peacock's five approaches*

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Arresting the growth of new burdens	Provide a stable environment
Simplification	A simplification of administrative requirements, for example standardized templates
Reduction in regulation	Reduction in tendering requirements, for example reduction in financial information requirements
Specific treatment of SMEs	Constrained by EU regulation. Careful drafting of specifications
Changing attitudes	Encouraging appreciation of benefits of SME:s Encouraging a broad interpretation of value for money, Avoiding bias in favour of large firms

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(Loader, 2007)

By providing a stable environment, companies may easier predict the future, ever changing requirements and contract types do not benefit small and medium sized enterprises. One way of improving the business environment is to have standardized templates.

Reduction in regulations is another approach; the author describes some regulations as burdens for many companies. By removing regulations that are not necessary, barriers could be removed for entering a market. Even though many laws originate from EU-laws and cannot be removed, however some regulations are still at the operational level and that means within access for change.

According to Loader (2007) specific treatment of SMEs could as well help increasing the level of competition; however positive discrimination was not supported by the author. As a last approach, the costumers should change their attitudes towards the market, for instance encouraging broader understanding; looking beyond pure value of money in contracts.

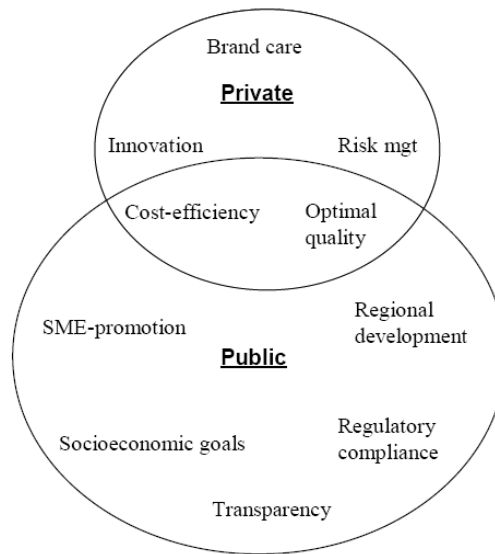
### **5.3 How can public procurements be improved?**

According to a paper made by the Danish firm, Copenhagen Economics for the Swedish Competition Authority there are interesting differences between public and private procures. Private companies are much more exposed to the realities of the free market. Because of the fact that private firms are forced to deliver profitability, it becomes natural that these firms seek optimal efficiency as procurers.

Public procurers operate in totally different circumstances where there is no threat of bankruptcy, the goals and intentions are different, accurate assessments are tough to carry out and the risk of lawsuits are much higher. Private procurers work more according to the market forces while public procurers are more or less controlled by politics.

Private procurers have objectives that are not shared by the public sector. Objectives important for the public include regional development, regulatory compliance, transparency, socioeconomic goals, SME-promotion, cost efficiency and optimal quality. For the private sector, other factors are important such as cost efficiency, innovation, band care, risk management and optimal quality. According to the author, the only common objectives are cost efficiency and optimal quality as seen in figure 2.





**Figure 7** Private and public objectives

(Copenhagen Economics)

The figure shows that both the private and the public buyers share a common interest which is cost efficiency and optimal quality. As a result, both actors see an advantage in having better competition.

Sometimes these objectives can collide as in the case of cost efficiency and SME- promotion. As an example, public buyers have stronger incentives for creating better and more efficient competition among their suppliers compared with private ones. The reason is that increased competition comes after certain investments in time and money, as a public institution these investments are valuable for society and promotes small and medium sized enterprises, however as a private company, promotion of competition adds to your costs while other companies in the market benefit from your effort.

One important discussion in the Copenhagen Economic report was the issue of contract size and time. According to Copenhagen Economics the contract time and size is an important factor during procurements. Few and too long contracts will attract large companies, however a mix of contracts with different size promotes a larger number of diverse sized suppliers.

“Large-scale procurements can be cost-saving in the short run, but not necessarily so in the long run. If contracts are very large, they will also be few. As a consequence, we would expect higher concentration in supplier markets, scale-driven entry barriers for small and medium- sized enterprises (SMEs), and reduced flexibility for the public users.”

(Copenhagen Economics, Page 5)

However, large contracts may sometimes result in a large number of subcontractors. As a result the main tenderer acts as a broker between the costumer and those SMEs which were not able to take part in the procurement process. Large contract may also decrease the unit price as volumes are increased.

A good procurement policy needs to take into consideration the balance between the benefits of having suppliers subject to a scale-like economy and promote competition among these companies.

Comparing private and public procurers, Copenhagen Economics believed the following lessons could be taken from the private sector.

***Communication needs to work extremely well*** between procurers and suppliers, which it is seldom does. Many suppliers experience that public procurers often ask for services or products which do not satisfy the actual need of the customer. If communication improves, suppliers may easier provide the proper service, resulting in lower costs and better and more efficient procurements. By arranging events such as annual forums, capacity building schemes and seminars, procurers would create a proper atmosphere, resulting in better future tender competitions.

***Customers should put less emphasis on how a project should be done and instead focus on what is to be achieved.*** Too much control hinders innovation and limits the search for cost-efficient solutions and as well limits SME-promotion. Private firms are normally much better at tolerating alternative manoeuvres by suppliers.

***Predictability concerning future requirements in tenders*** is an important factor when planning to submit tenders. In many cases, predictability is very poor and tenderers do not feel they have the enough time to look at specifications.

“In some industries and for some activities, firms may need to invest in research and development long before the actual tendering procedure is started in order to meet these demands. If firms are uncertain on tomorrow’s demands in public procurement, they may find it too risky to do so.” (Copenhagen Economics, page 6)

Regarding the predictability, a Stockholm Chamber of Commerce report (2005) suggested that tenderers should become informed about future considered award criteria’s much more in advance and this should be regulated by law.

If predictability improves, participation of SMEs will increase and this stimulates innovation in the industry. There should be sufficient time between the tender phases such as contract announcements, time limits of tenders, decision makings and start of deliveries.

***Learning from past procurements*** by evaluating and analyzing earlier procurement life-cycles. It could provide very useful knowledge and as a result teach public procurer many lessons for future procurements. The customer could as well monitor performance during the contract life, which would send strong signals to the supplier, leading to maximized performance. In practice, this learning could be done through interviews and questionnaires.

## 5.4 Combinatorial tenders

Public procurements should be based on common business practices. Combinatorial tenders tend to include certain important aspects of practices which focus on better and improved tenders. One important aspect is to take charge of competitive strength in best possible way.

Strengths and weaknesses among tenderers are usually related to qualitative aspects but they could as well in some cases be related to economies of scales. Some tenderers become more competitive if the contract volumes increase and as a result they can offer lower unit prices (see case one). Other tenderers tend to become more competitive with smaller volumes because of capacity limits, they are able to offer lower unit prices only in small volumes of work (see case two).

Combinatorial tenders could be used as a tool for solving the following problems: When numerous tenders are carried out at the same time, the most common method of assessment is to analyze each tender/contract independently, consequently the best tender will usually turn out to be the winner. However, evaluating each tender independently may not necessary be the best method of assessment, since the price of a submitted tender is sometimes dependent on the number of obtained tenders/contracts. In an everyday tender, the tenderer is not able to know how many or which tenders it will be awarded, at the same time the tenderer is bound to take the contracts in case of win. This arrangement increases the risks for the tenderer, resulting in higher tender prices.

As an example, assumed that three similar sized contracts are being tendered simultaneously, named A, B and C. In case one, the unit cost for each tender/contract will decrease if the tenderer wins all the three contracts because of economies of scale. However, if the tenderer is uncertain whether it will win all the contracts or not it will have two choices. If the tenderer submits a tender priced according to a mean value it will result in a loss in case of winning one tender or a profit in case of winning three tenders. If the tenderer submits the price according to each unit it may decrease its price competitiveness, nevertheless, the profit will be higher in case of a victory.

In case two, the unit cost for each tender/contract increases if the tenderer wins two or three contracts. If, the tenders are priced according to each unit, the result will be a loss in case of winning two or three tenders or a profit, in case of winning a single tender. When the tenderer submits the price according to a mean value, it may increase its price competitiveness, nevertheless, the profit will be lower in case of winning all the contracts.

Whether or not, having positive or negative effects of economies of scale, traditional procurement models may aggravate good competition in many cases. As a result it may deteriorate competition. Combinatorial procurements are by some people seen as a solution to the problem; furthermore, there are no specific obstacles in the law.

In combinatorial procurements, tenderers are able to submit tenders for each unit separately, and in addition, they may as well be able to submit a tender for aimed at a certain combination of the contracts. The tenderers are also given the possibility to set out capacity limits which if they do not want too large contracts. In the contract award the best combination of tenders which results in the lowest price will be awarded the contracts.

The competition level is an important factor in combinatorial tenders. Since combinatorial tenders may benefit large companies subject to economies of scale it should not be used in contracts which smaller or medium sized companies are expected to compete for.

One problem in combinatorial tenders is the large number of tenders that clients receive. Already in case of just a few tenders, the client may receive a large number of combinatorial prices. As an example, four procured contracts may result in as much as 16 different tenders.

## 6 Parks- and streets maintenance procurements

### 6.1 A look at the parks- and streets maintenance sector

Municipal park- and street maintenance is a difficult task, the municipality needs to satisfy all kind of people and citizens with different requirements. The service is aimed at making various parks and streets areas available for people, vehicles even during extreme weather such as heavy snow or slip.

Different passengers and citizens all use the same areas, parks and routes, because of this reason the maintenance responsibility is in the hands of the municipality or private companies.

In the case of street maintenance, traffic routes used by public transportation systems are given higher priority especially during heavy snowfall, as an example, routes connecting homes and buss stations, metro stations as well as sidewalks and bicycle routes are given higher priority. Winter maintenance is usually considered a very difficult task since it is complicated to forecast a snowy or a mild winter, as a result contractors and municipalities do their best to plan and organize their resources accordingly.

Snow maintenance takes place during many different occasions. The point in which maintenance takes place proceeds from 1 cm up to 15 cm of snow depending on road type and priority. Team leaders need a lot of experience when working with maintenance issues.

Street maintenance is a resource demanding business both in terms of personnel and equipment. As parks are concerned, these are not as highly prioritized as streets and roads in terms of maintenance, however they are important social and environmental areas in the city. Park maintenance includes activities such as planning, plants- and trees maintenance, roads, garbage collection etc (Kommunförbundet, 2003).

A number of classic equipment and machinery used in parks and street maintenance are illustrated below:



**Figure 8** Some equipment used in park-maintenance

(Reproduced, Husqvarna)

**Cultivator:** Stirs and pulverizes the soil, either before planting or is also useful for removing weeds and to ventilate/loosen the soil after the crop has begun to grow.

**Brushcutter:** A handheld tool that uses a monofilament line instead of a blade for cutting grass and other plants near objects.

**Tractor:** Garden tractor designed for cutting grass

**Lawnmower:** A machine with revolving blades cutting grass at even length

**Blower:** Collecting leaves with the aid of a blower



**Figure 9** Some Equipment used in street maintenance

(Reproduced, Société de L'assurance automobile, Québec)

**Tool vehicle (Wheel Loader):** A type of tractor, usually wheeled, sometimes on tracks, It has a front mounted square wide bucket connected to the end of two arms to dig up loose material from the ground, such as dirt, sand or gravel, moving it from one place to another without pushing the material across the ground. (Wikipedia)

**Farm Tractor:** An ordinary tractor used for removing snow

**Snow Blower:** This is a vehicle fitted with a mechanical blower to remove snow.

**Winter Tool Vehicle:** Used for snow removal

**Truck:** A truck equipped with a bucket

**Sweeper:** Machines used for sweeping streets, also used for winter maintenance

## **6.2 Park- and street maintenance in Stockholm**

The Stockholm parks & streets maintenance is today contracted to external contractors (Brandén 2004). In 2007, the city purchased services worth more than SEK 240 million. These services included snow clearance, gritting, street cleaning as well as on park-maintenance (Bokslut och verksamhetsberättelser 2007). In June 1, 2007 the Traffic Administration and the committee of waste management were merged resulting in a minor re-organization. Some responsibilities that once were managed by the city districts such as roads and streets maintenance were now handed over to the City of Stockholm Traffic Administration (park maintenance is still managed by the different districts). The re-organization itself took place in mars 1, 2007, and in May 1 the department became as well responsible for the municipality's graffiti removal section.

A common view shared both by the city councils and the Traffic Administration is the lack of competition among contractors during tenders. During the procurement rounds of 2002 and 2003, a total of SEK 240 million worth of services was purchased which is compared to the previous procurement rounds in 1997/98, SEK 85 million more (no index regulation). The reasons for the increase of costs were according to Brandén (2004) factors such as compensation for earlier under-pricing, higher environmental requirements and the lack of competition among the tenderers.

Outsourcing of park- and road maintenance is a new phenomenon in Swedish municipalities. Both costumers and buyers are just becoming more experienced in this field and the market is starting to mature, this is because services related to parks and roads maintenance were previously carried out by the municipalities themselves (Brandén 2004).

## **6.3 Market concentration in the past**

In 2001 a survey was conducted in order to study the number of contractors in the market. The report pointed out 16 firms existing in the Stockholm market, from which three of these dominated the market. The three largest contractors had mutually a 92% market share and the largest of them, Stockholm Entreprenad (SEAB) a PEAB affiliated company had 83% of the total market. SEAB was absolutely the most powerful contractor leaving other large firms with very small market shares. Other companies at that time were Skanska, Samhall, Ströms

Svensk Trädgårdsavdelning and Björn Entreprenad. Table 4 illustrates the market concentration in Stockholm in 2001.

*Table 4 Number of companies in the market, year 2001*

Contractor	Stockholm Entreprenad	Skanska	Björn Entreprenad	Samhall	Ströms Trädgårdsavdelning
Number of districts	16	1	2	1	1
Market value	SEK 201,6 Million	SEK 18,3 Million	SEK 11,1 Million	SEK 9,0 Million	SEK 2.2 Million
Market share	83 %	7 %	5 %	4 %	1 %

(Brandén 2004)

Historically, parks- and roads maintenance was managed in-house within the municipality itself until year 1993. From that year, due to economical and political reasons, the department was exposed to competition resulting in the creation of Stockholm Entreprenad (SEAB). However, the new policy had an adverse impact resulting in low profitability for the newly established SEAB. The company faced tough economical times until it was privatized and taken over by PEAB in year 2000 (Brandén 2004).

## **6.4 Market concentration in the municipality of Stockholm today**

In order to get hold of the latest figures on the level of competition, a survey was made in this report to show the number of contractors in the market. The survey illustrated the state of competition in the area of park- and street maintenance made in the last round of procurements, some of these reaching back to 2003. All procurements (streets & parks maintenance) made before 2007 were conducted by the city districts. However, street maintenance procurements (and a few park contracts) were carried out by the Traffic Administration following 2007, while park maintenance was kept under the responsibility of the districts.

In 2007, seven different procurements were made of which, two were park maintenance contracts seen in table 5.

*Table 5 Procurement made by the Traffic Administration, year 2007*

Contract time	Object	Winner	Other Tenderers
071001 - 091001	Kungsträdgården & Berzellii park	Tylömarks	SEAB, Obikum, Marbit*
071001 - 100930	Årstafältet	SEAB	Widéns, Svensk-Markservice
071001 - 100930	Södermalm/Södra HH	SEAB	VV- production
071001 - 090930	Skärholmen	SVEAB	SEAB, VV- Production
071001 - 090930	Farsta	SEAB	SVEAB, MJ Contractor VV-Produktion
071001 - 090930	Skarpnäck	SEAB	SVEAB, VV-Produktion
071001 - 091001	Årsta	SEAB	SVEAB, VV-Produktion

(Source based on award letters)

In 2008, eight new procurements were made and SEAB lost two areas. The areas of Hässelby/Vällinby and Rinkeby/Tensta/Hjulsta were taken over by VV-Produktion, these areas were formerly maintained by SEAB. Table 6 shows the procurement made by the Traffic Administration in 2008:



*Table 6 Procurement made by the Traffic Administration, year 2008*

Contract time	Object	Winner	Other Tenderers
080901 - 091001	Hässelby/Vällinby	VV-Produktion	SEAB, SVEAB,
080901 - 100930	Vällinby centrum	VV-Produktion	SEAB, SVEAB, E-Schakt*
080901 - 100930	Spånga/Tensta/ Rinkeby	VV-Produktion	SEAB, SVEAB, E-Schakt*
080901 - 090930	Hägersten – Liljeholmen	SEAB	SVEAB, VV-Produktion
080901 - 090930	Östermalm	SEAB	VV-Produktion* E-Schakt*
080901 - 090930	Kungsholmen	SEAB	VV-Produktion*, E-Schakt*, SVEAB
080901 - 091001	Vantör	SEAB	VV-Produktion, SVEAB, E- Schakt*
080901 - 100930	Kista	Björn-Entreprenad	SEAB, VV-Produktion SVEAB, MJ Contractor* E-Schakt*

- The company did not submit a price or dropped out

As seen in table 6, Vägverket Produktion received three new contracts during the 2008 round of procurements. These areas were formerly maintained by Stockholm Entreprenad. 2008 is seen as a more successful year as competition is concerned. However, the competition in central areas such as Östermalm (2008), Kungsholmen (2008) and Södermalm/Södra Hammarbyhamnen (2007) were still extremely weak in terms of number of tenderers. Expect of SEAB, other competitors such as E-Schakt, Vägverket Produktion and SVEAB, either dropped out or submitted blank tenders in tenders belonging to the central areas of Kungsholmen, Östermalm and Södermalm/Södra Hammarbyhamnen. Stockholm Entreprenad was the sole tenderer in these particular areas.

There are several reasons behind the lack of competition in these areas. According to Brandén (2006) the technical complexity of the inner city keeps many contractors away from this market, as a result, only experienced contractors such as Stockholm Entreprenad are able to submit “good” tenders during these procurements. The underlying factors behind the high market entry barriers are analysed further in the next chapter, through an in-depth analysis in which interviews have been conducted with various park- and street maintenance contractors.

## **6.5 Barriers of market entry in the park- and street maintenance sector**

In 2008, Stockholm Entreprenad lost two districts to its rival Vägverket Produktion. The districts of Hässelby/Vällinby and Rinkeby/Tensta/Hjulsta were formerly maintained by SEAB but they were taken over by Vägverket Produktion in the latest procurement round (2008). Even though it meant a slightly increase in tender participation, the level of competition from the clients point of view remains inadequate, especially in inner city tenders. Among the 18 street maintenance contracts in Stockholm, only five are operated by other contractors than SEAB.

In this chapter 12 contractors and clients were interviewed, some were contact holders, some only tenderers and others just companies inside the market (see list in page 2). In order to make a comparison, interviews were conducted with one major contractor in Oslo as well as Oslo municipality, an important client. The interviewees mentioned the following barriers (all interviews are translated from Swedish into English) of market entry:

### **Stockholm Entreprenad is too dominant**

All the interviewees pointed out SEAB's market dominance as a great market entry barrier. SEAB has the knowledge and the routines both in terms of logistics, equipment, city geography and the fact that it has a lot of skilled personnel. Calculating the contract value becomes much easier if a company has enough experience and knowledge about its market. One contractor said:

“As a customer, a lot of employees at the Traffic Administration are former employees of SEAB. The company was managed by the municipality (before 2000) and even earlier it was part of the municipality itself. In this context, SEAB has a huge head-start by having long years of experience combined with assurance and trust among the customers. In the case of SEAB, customers and contractors have the same expectations from each project and by routine the specifications will be adapted and suited to the very abilities and recourses of SEAB itself, this makes business less problematic.” (Contractor)

According to Brandén (2004) the company has invested considerable amount of money on GPS-technology. SEAB is also well familiarized with the procurements and the Traffic Administration as a client. At the same time, the client is familiar with work SEAB does as a contractor.

### **High requirements**

One contractor mentioned the requirements made by the client as a serious barrier of market entry. The client referred to the need of references during tenders as well as overstated educational prerequisites. According to Brandén (2004), the market itself has been seen as a barrier by many competing firms. One barrier has been the increased quality-requirements in the contracts which have resulted in higher prices. Environmental prerequisites such as the type of utilized machines, type of fuel used and sanitation issues have affected the supplier costs. Required environmental standards on machinery usually results in less permitted operational time and as a consequence, contractors need to invest in new modern equipments.

### **Lack of resources**

Apart from SEAB's dominance, all interviewees mentioned the lack of resources, especially those related to winter maintenance of various sized roads and streets. Snow removal requires a lot of machinery and personnel, according to the interviewees; no company has access to these large amounts of resources, except SEAB.

“Generally, the customer seeks as much convenience as possible, if they order maintenance in the area X for instance, they want to have as much included as possible, and consequently this does not correspond with our abilities since we don’t have the resources, especially not during the procurement period. This combined with the fact that we have a dominant player (SEAB) inside the market, makes participation almost impossible from our side.” (Contractor)

In the literature, Brandén (2004) mentions the shortage of recourses both in terms of personnel and suppliers. Depending on the winter conditions, contractors hired by the municipality usually use sub suppliers. However, in recent years, contractors have found the process more demanding since the numbers of small suppliers have declined. The merger of small supplier-firms may explain some of the increases in costs. According to the contractors, increased personnel costs and recruitment difficulties add to the number of problems and the costs.

### **Compensation**

Another barrier has been the terms of payment in the contracts. Street maintenance, specially, winter maintenance of roads and streets are not seldom related with increased operational costs. A contractor may turn out to be blacklisted by the media if it cannot handle a certain snow circumstance. Many contractors tend to stay out from public tenders in order to keep face (Brandén 2004).

The city previously used four different types of pricing models; a fixed pricing model, a floating pricing model, a combined model and a model using shared risks. In general all contractors argued that the fixed parts of the contracts did not cover their own fixed costs. Winter maintenance requires a large fixed organization that has to be in regular state of alert. The fixed compensations needs to cover fixed costs such as organizational expenses and state of alert costs, apart from that the contractors prefer floating prices which compensate for each duty and not the number of extra hours.

“As a contractor you want to be guaranteed compensation even if it doesn’t snow, it creates an incentive not to send your machines to a construction site. As a result, a higher compensation should be made. In a mild winter, machines cost a lot of money without being used. As a contractor you need to make sure you keep you employees and machinery employed all the time. Most contractors prefer sweeping streets over removing snow since it is more of a permanent and a less risky task.” (Small contractor)

One contractor believed the city should use a compensation model which divides the risk between the contractor and the client. The so called “Sollentuna pricing model” was a compensation model used in the municipality of Sollentuna. According to this method, the contractor and the client agree on a fixed compensation, a threshold based on certain hours of street maintenance, however if the contractor exceeds the threshold by a certain number of hours it will be compensated for half of that extra time. In the same way, if the contractor does not reach that threshold, the client will receive half the value of the remaining time back.

### **Predictability and Contract Periods**

According to Copenhagen Economics (2007), predictability is an important prerequisite in SME-promotion. Longer contract, continuity of the procurement rounds, simplicity in specifications/contract notices, and uniformity of contracts, long-sightedness, openness and good communications create predictability and stimulates innovation. Brandén (2004) claims the city’s business culture still fosters the old monopoly spirit even though it’s policies have changed.

All interviewees believed that short contract periods create market entry barriers. Most companies wished to get five to six years contracts with three to four years of optional time.

“Most companies have a depreciation time of five years for their machineries. This means we need at least contracts for at least 6 years, longer contract period creates greater turnover. In VV, the contract period is 5-7 years.” (Large contractor)

“Unfortunately, contract periods tend to be too short in many projects. We usually back as long contract agreements as possible, at least 5 to 6 years plus additional 3 to 4 years contracts. The maintenance sector requires a heavy organization and a lot of investments, that is why a longer agreement guarantees us better economic security. In order to make the contract less risky for the customer and the contractor, there should as well be a revaluation time, perhaps after 3 years.” (Large contractor)

According to Soul (2004), many contractors do not submit tenders since they see the projects as too risky, associated with too fast growth.

### **Too many specifications released at the same time**

In 2007 and 2008, the number of released specifications was seven and eight. Many contractors faced huge difficulties in analyzing these documents since too many were released at the same time. Copenhagen Economics (2007) argues that sufficient time between the tender phases is a prerequisite for better competition and SME-promotion. In this case both large and small companies complained about this fact. One large contractor said:

“If there are 14 districts, the customer should release two projects each year continuously, as a result there would always be a continuous flow of tenders available all the time. That is how Vägverket does; their projects are released according to this method. The Traffic Administration releases 8 specifications this year alone and just one the year after. Sending out too many specifications simultaneously creates problems for us and the client since it may pay too much for some of the projects. Most contractors will find it hard to evaluate larger number of specifications at the same time.” (Large contractor)

“As a large company, we still face problems with the number of released specifications, in some cases we simply ignored some due to the lack of time, imagine, not everybody has access to the same experienced calculation resources as we have. Even though the street maintenance contract will improve in terms of uniformity and the numbers released, we still have the park contracts left to deal with.” (Large contractor)

### **Weak client competence**

Large number of released contracts could be more hands-on if the uniformity and consistency would improve. Regarding the work on uniformity and consistency, interviewees praised the latest effort made by the Traffic Administration in this regard.

Comparing the contract holders in 2001 and 2007-2008, it is clear that a few companies have left the market. A medium sized company gave the following reasons for the market exit:

“When the districts became responsible for the parks- and streets maintenance, a lot of client competence was lost. Many of our clients didn’t have the required competence and knowledge in this field. A school teacher cannot do procurement, that’s why keeping a good conversation was not an easy.” (Middle sized contractor)

### **Market prioritization**

Large construction firms such as Skanska and NCC are both active in construction and road-maintenance projects. In 2001 Skanska, the largest construction company in Sweden had road-maintenance responsibility over one district, however, today the company is absent from the market. According to the interviews, both companies focus most of their resources on the construction sector. In the maintenance sector Vägverket is the prioritized customer. Other firms such as Samhall and Ströms Trädgårdsavdelning have all left the municipality market. One Contractor gave the following reason:

“Stockholm is an interesting market for us, but at present we have a decision by the management to prioritize Vägverket as our main customer, since we have not thoroughly developed this relation yet, first of all, we would like to see this relation grow. VV has 133 maintenance areas in Sweden and we operate in roughly 10% or eleven of these areas... Removing snow for Vägverket is technically very different from snow removal in municipal roads, especially those in Stockholm. A lot of resources and personnel are needed if the company wants to enter this market.” (Large contractor)

### **Lack of access to storage locations**

The lack of storage locations is a major problem for contractors in Stockholm. SEAB is perhaps the only company with proper and well situated storage locations. Those contractors without access to well situated storage- and distribution locations find it hard to compete with SEAB. The Traffic Administration does not offer any help in finding these location.

Oslo municipality has a different policy regarding the storage locations. The city maintains and administers all location in the city. As a result all contractors are obliged to rent these locations from the municipality if they win a maintenance contract.

### **Geographical size of contacts**

As described in earlier in the report, the geographical size of an area does have an effect on the competition level in a market. Copenhagen Economics cited *“The size and length of procurement contracts matters. Few and large contracts lead to concentrated markets whereas a mix of contracts in various sizes foster a more varied market structure.”* (Copenhagen Economics, 2007)

Among the interviewees, only larger companies showed interest in producing street and particularly winter maintenance services. However, the small and medium sized firms did not show any special interest in this sector, claiming winter maintenance of streets to be too technically challenging and economically unprofitable. The dilemma is even more compound in the central parts of Stockholm where complex road networks and crowded streets turns winter maintenances especially, snow removal into a very difficult task. In this regard, the small and medium sized contractors tend to focus more on easier and less resource demanding activities such as parks services, winter maintenance of parks and maintenance of properties and real estate.

One important question in this report is the reason for why some large companies such as Skanska and NCC have been absent from the Stockholm maintenance market, as mentioned earlier, Stockholm Entreprenad has been the only large company in the Stockholm market until 2008. According to the large companies themselves, geographical limitations and limited contract sizes serve as market entry barriers since larger contract volumes are considered more profitable for larger companies. The large Contractors mentioned the following:

“One solution would be to join several city districts together, create larger geographical areas as well as larger contract values. In Vägverket, the contracts range between SEK 17 to 25 million per year.”  
(Large contractor)

“It’s better to have larger areas, maybe connect some of these districts together.” (Large contractor)

“Smaller areas would be too unprofitable, both for us and the client. Smaller areas mean more contracts that would be disastrous.” (Large contractor)

An area is usually made of both small and larger streets of which the bus lines are considered as large. Brandén (2006) mentioned an idea of removing the bus lines from the general municipal street network in order to attract specialized smaller companies which could easier carry out work in the smaller streets, resulting in SME promotion. Without knowing the details of this idea, many contractors supported the thought of removing and separating apart the small and the large streets.

“I believe, such solution would attract more tenderers, at least to the smaller streets. We would be interested in such a solution however, an alternative would be to mix these types of contracts with the park contracts and include winter maintenance of parks as well.” (Medium sized contractor)

On the other hand there was a separation in terms of parks- and streets maintenance following the 2007 reorganisation. This move was extremely appreciated by especially the smaller contractors, seen as an important step in the right direction.

In contrast to Stockholm which has 18 different street maintenance contracts, Oslo has only four areas. Two of them are run by the State owned Mesta (the central parts), one is maintained by Norske Vei and the last is maintained by ISS landscaping. In the central area, the contract is worth NOK 40 million, about SEK 48 million in Sweden. The contract value increases by NOK 20 million in a snowy winter ( SEK 73 million total). In the three other areas, the contracts are worth NOK 20-25 million ( SEK 26 million). These areas become approximately NOK 5-10 million more expensive during additional snow ( SEK 35 million). The compensation is fixed up to 5 cm and includes five hours of work in main roads and nine hours of work in smaller roads.

In an interview with ISS landscaping Oslo, the company mentioned that winter maintenance sector is a profitable and good sector in Norway. The Same Company mentioned the opposite, concerning the Swedish market.

### **The economic boom**

Several interviewees mentioned the economic boom as a source of barrier, concerning the maintenance market. The economic boom increased investments in the classical construction sector which attracts all the large companies. Contractors such as Skanska and NCC prefer being involved in construction activities rather than producing maintenance services such as snow removal. The first activity (construction) is much more profitable in comparison to the second activity (maintenance).

### **Fines scare contractors**

Another firm mentioned the fines which are used as a tool by the clients against the contractors during mismanagement. These fines tend to keep potential bidders away from the tenders.

### **Other barriers**

In general winter maintenance is seen as a problematic area. Many contractors believe the reason SEAB is able to survive is because of its specialization in the field, as well as due to its scale. SEAB: s competitors including SEAB itself mentioned the supplement costs as a way of earning money. These costs include reparation of for instance park benches, playgrounds and various extra street sweeping etc. These costs could be in general worth 10% of the contract value.

“The money does not come from the contract itself but from other smaller complementary activities. Those activities enable us to charge higher prices, however in order to carry out these complementary jobs, we need further resources than we have today.” (Contractor)

### **Market strategies:**

Many contractors, such as Vägverket Production have until today focused their work on other areas outside Stockholm municipality, rather than the Stockholm municipality. SEAB has in the same chosen Stockholm municipality as its home market. According to a client in Danderyd municipality, contractors tend to focus their activities in different geographical

areas due to strategic reasons. In table 7, contractors producing streets- and park services in various municipalities outside Stockholm are shown:

*Table 7 Contractors producing streets & parks maintenance in municipalities outside Stockholm*

Municipality	Contractor
Botkyrka	Vägverket Produktion, Svensk Markservice, Miljöbyggarna
Danderyd	Vägverket Produktion (roads)
Ekerö	Närlunda Schakt & Transport
Haninge	Inhouse
Huddinge	Vägverket Produktion, SVEAB, Skanska
Järfälla	40% inhouse, 60% purchased, present contractor is Järfälla
Lidingö	Vägverket Produktion (snow), SEAB (sweeping sand)
Nacka	Inhouse
Norrtälje	Vägverket Produktion
Nyvarn	-
Nynäshamn	Inhouse
Salem	Grund&Markplanering AB, NON Farmatjänst
Sigtuna	
Sollentuna	Vägverket Produktion
Solna	SEAB(snöröjning, vinter), Vivaldi (Park)
Sundbyberg	Vivaldi, Mj contractor, Sobel
Södertälje	Phoria
Tyresö	Bellman
Täby	NCC (12 years contract)
Upplandsbro	40% inhouse, 60% purchased
Upplandsväsby	Vägverket Produktion and MJ contractor
Vallentuna	Vägverket Produktion and Jr förvaltning AB
Vaxholm	Vägverket Produktion and SEAB
Värmdö	-
Österåker	-

## **7 Infrastructure and public works**

### **7.1 The Swedish infrastructure sector**

The Swedish construction industry employs 270 000 people and the sector receives SEK 220 billion of investments annually (Sveriges Byggindustrier, 2007). The Swedish construction industry has changed considerably during the last 15-20 years. From being a heavily subsidized and regulated sector the construction industry today faces a lot more competition than before. The sector is today heavily taxed and the market is dominated by a few large and middle sized construction companies. There has also been an increase in the number of foreign companies, especially in larger infrastructure projects as well as an increased custom of sub contractors (Sveriges Byggindustrier, 2005).

Of the 220 billion SEK investments in the construction sector, 61 billion SEK was invested in infrastructure projects (the rest was invested in the housing sector) such as streets, roads, telecommunications, electricity, sewage plants and power plants. Other infrastructure-projects are those related to new housing production mainly earth excavation.

The construction sector has a considerable effect on the national economy. Investments in this sector create increased long term trade and higher demand of commodities and services. Efficient transportations and good housing markets are considered very important for the economical growth of a region. Today, investments made in the construction sector accounts for about eight percent of the total GDP.

The investments in the infrastructure sector increased from SEK 16 billion to SEK 48 billion between the years 1950 and 1972. However, the investments dropped and stabilized around 35-40 billion SEK until the early 90's .

In the 90:s, the need for better infrastructure was turned into a key political point resulting in a SEK 100 billion governmental (ten years period) expenditure on projects like roads, railroads, airports and ports in a. Excellent infrastructure was considered as a prerequisite for achieving a healthy economical growth. Botniabanan, Götaleden, Citytunneln in Malmö and Södra länken in Stockholm were some of the projects considered at that time.

In 2006, SEK 61 billion were spent on infrastructure projects of which half of it was provided by the private sector. Energy investments as well as expansion of telecommunication/broadband networks increased to a great extent in recent years and accounted for almost 40 % of the infrastructure investments in 2006.

The government and the municipalities are responsible for the country's infrastructure. Until today they have sponsored all the projects, in recent years however; the PPP option has received more and more attention by the politicians.

### **7.2 What companies compete in the Swedish market today?**

In 2006, there were 920 000 registered firms in Sweden of which 68000 were active in the construction industry of which 88 percent of them had less than four employees. Of 68 000 construction companies, there were 23 800 contractors in the field of roads- and infrastructure (Sveriges Byggindustrier, 2007).

The construction sector is today dominated by domestic companies but the number of foreign companies has increased in recent years. In 1990 there were only 76 foreign companies in Sweden having 7300 employees in the construction business, this number increased to 242 companies and 23 500 employees in 2005 (Konkurrensverket 2007). In 2006, The Norwegian



company, Veidekke, was (in terms of turn-over) the 7th largest construction company in the Swedish market.

*Table 8 The largest construction companies in Sweden 2006*

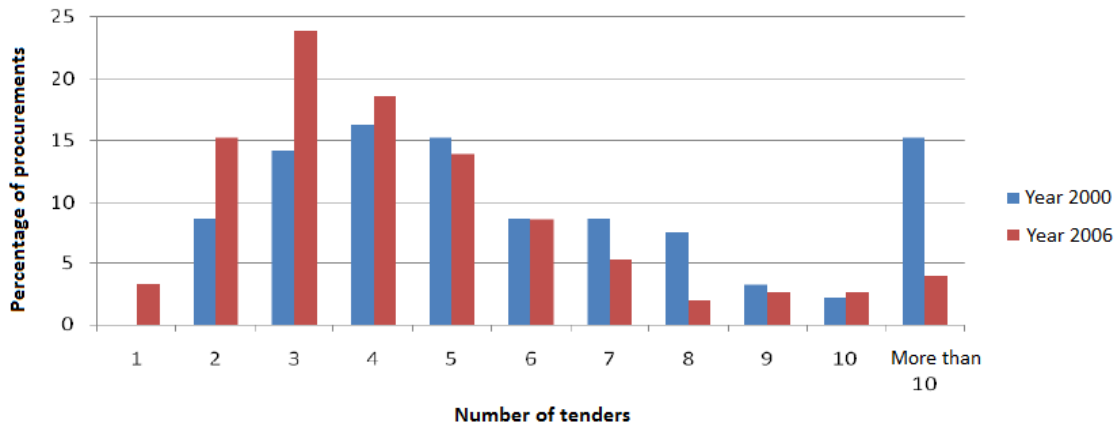
Company	Turnover SEK million in Sweden	Turnover SEK million Abroad	Number of employees in Sweden	Number of employees abroad
1. Skanska	26 743	98 755	10 631	45 454
2. NCC	28 134	27 742	10 611	11 263
3. Peab	22 922	3 756	9 420	1 264
4. JM	9 392	2 673	1 943	343
5. Vägverket Produktion	6 679		2 404	
6. Banverket Produktion	2 970		2 846	
7. Veidekke Sverige AB	2 184		1 080	
8. Oden Anläggningsentr.AB	999		349	
9. Wäst-Bygg Gruppen AB	829		190	
10. AF Bygg i Göteborg	765		154	
11. Svenska Entreprenad i Mälardalen AB	722		309	
12. Fastec Sverige AB	682		14	

Among the largest tenderers of the Traffic Administration, only one foreign company was found (2006 to 2008). This company, Finnish Lemminkäinen is responsible for the restoration of the bridge “Norrbro” (see appendix 1).

### 7.3 Low competition in public procurements

The competition in procurements related to infrastructure and works projects have decreased in recent years. In 2000, procurers received 4 tenders in 39 percent of all the procurements made. This proportion increased to 61 percent in 2006. In 2000, clients received 10 tenders in 17 percent of all procurements. This share was to seven percent in 2006. However, the total number of infrastructure procurements increased from 92 (2000) to 151 (2006).

*Table 9* The number of procurements allocated according to the number of received tenders in infrastructure procurements. Year 2000 and 2006.



(Source: Adapted from the Swedish Competition Authority)

Interviews were conducted with 14 different companies and institutions (see list page 3). All dialogues have been translated into English.

One interview was made with Lars Jagrén, chief economist in the Swedish Construction Federation. He gave the following explanation to the low competition in infrastructure procurements:

“I believe one important reason for that is the economical boom we have witnessed in recent years. The increased demand in the markets has resulted in a shortage of resources and supply. When asking the contractors, 70 % of them tell us that they would actually submit more tenders if they would have enough personnel.

The market works as follows; first the economy goes up, then the construction increases, as a result employments goes up, wages increase and finally after certain lag time public revenues increase. The budget surplus takes place at the very end of this chain, a year after the actual economical boom resulting in a ketchup-like situation. In a very short period of time large amount of money is injected into new construction projects, as a result contractors are not able to carry out all these projects simply because of resource shortages. Another reason for the shortage of resources is the lack of graduate students in the field of infrastructure.” (Lars Jagrén, Swedish Construction Federation)

Lars Jagrén further described the number of construction companies in the Swedish market, mentioning the low number of SMEs as one reason for the lack of competition:

“Having only two, three or four interested tenderers in connection with large infrastructure projects is not that unusual in Sweden. Not seldom we see NCC, PEAB and Skanska involved in large infrastructure projects, since generally these are the only existing large construction companies in Sweden. At times we may as well see firms such as Veidekke which is foreign and Oden in the large infrastructure projects.

However it is not that strange, looking at the top 10 largest construction firms in the country we soon realise that the 5<sup>th</sup> 6<sup>th</sup> and the 7<sup>th</sup> etc. firms on the list all of a sudden become very small in comparison to those top on the list. We can ascertain that there are in fact very few companies having enough financial resources in order to be involved in the large infrastructure projects. Even though small contractors are able to handle large projects technically they prefer not to, because of the risks involved. Large projects tie a lot of resources, consequently, if the project fails, the entire contractor will be affected.

When talking to smaller member firms, they express a desire to carry out smaller infrastructure projects, indicating that the state or the municipalities should split up the projects into smaller parts in order to increase the competition.” (Lars Jagrén, Swedish Construction Federation)

Sweden has witnessed a small increase in the number of foreign construction companies which naturally increases the competition, but the number of foreign companies is still very low. In a question about whether the Swedish market is interesting or not for the foreign construction companies, Jagrén argued “... large costumers in Sweden have until now been too slow in terms of translating various documents into foreign languages”.

From the market point of view, the low number of tenderers in public procurements are mainly due to lack of resources combined with a booming construction market. Predictability and better information creates better ground for competition in the market. (Copenhagen Economics 2007). Concerning the low participation of tenderers in procurements, one Swedish contractor gave the following statement:

“The Stockholm/Mälardalen region has a market worth roughly 11 Billion SEK every year. Our organization is just able to handle projects worth about 1.4 billion SEK annually, not more, this means we have a market share of around 16%. Historically, we are however smaller today compared to 15-20 years ago because of increased competition.

Regarding the poor competition level in Sweden, I believe that, the more information we receive about the various projects, the more interested we will become and naturally more firms will join the race or show up during the procurements. Preferably, we would like to know about the projects two years in advance however, 12 months is satisfactory as well. This enables us to prioritize the projects and choose the most suitable.

The market-supply concerning projects has been very good. In addition to public costumers, we have a lot of private costumers as well; off course this requires further resources from our side. As of the entire market we are only able to carry out 5 % of the projects available in the market. For that matter we have probably taken too many jobs as compared to our available resources but off course we have had a very strong economical boom in recent years.” (Swedish Contractor)

According to the Swedish contractor, clients should organize special information days in order to introduce their various projects. These measures have usually a great impact on the market. The contractor argued “...*to just publish the projects is just not enough*” (Swedish contractor). The contractor as well mentioned the need for receiving clear, uncomplicated and more standardized specifications, “... *many clients write specifications that are too cryptically made.*”

In a question on what he believed the Traffic Administration should do, the contractor stated:

“Clients don’t think procurements, but only want to start the projects as fast as possible. Clients should create separate departments that only work with procurements. Who is responsible for procurements in the Traffic Administration of Stockholm? If I have worked in this company in 26 years and still don’t know who is responsible for procurements in the Traffic Administration of Stockholm, then something is wrong.” (Swedish Contractor)

## 7.4 Market entry barriers for foreign construction companies

The Swedish construction sector is dominated by large domestic contractors. Lemminkäinen (Lemcon) is perhaps one of very few foreign suppliers contracted by the Traffic Administration at least between the years 2006 and 2008. In general, there is a demand to increase the number of foreign construction contractors in order to increase the competition. Unfortunately, there are many barriers keeping many foreign firms out of the Swedish market. Some of these barriers come into effect during the entry to Sweden; others are faced during the expansion.

In order to analyze the barriers, a number of foreign firms were interviewed, some already established here and some not. Apart from that a number of Swedish clients as well as institutions such as The Swedish Construction Federation and the German-Swedish chamber of Commerce were interviewed

### **The market concentration in Sweden**

The Swedish construction sector is dominated by a few large companies. Skanska, the no 1 construction firm in Sweden had a turnover equal to the 6<sup>th</sup> to the 50<sup>th</sup> largest construction firms together (Byggfakta 2007). The strong domestic market is seen as an entry barrier for many foreign companies. A Danish contractor mentioned:

“There is no doubt that major Swedish companies like NCC, Skanska and Peab, are very strong competitors, they are doing a lot to keep their share in the Swedish market, in that respect it’s difficult to compete with them.” (Danish Contractor)

### **Local market knowledge, local partners and the size of the projects**

According to Porter (1998), entering a local market as an international company requires a lot of skills and financial resources. As an international firm it is crucial to know the market in order to be able to compete with local companies. All the interviewees mentioned the necessity of having local partners, joint-ventures or do take-overs as a way of accessing the local knowledge, contacts and the distributional networks. One German contractor mentioned:

“Foreign companies without representation do not have the adequate contact network as Swedish firms have. That creates a lot of extra costs and it becomes extremely difficult to enter the market. We have created a Swedish organization that makes the entry a lot easier. Our workforce has as all the contacts necessary in order to work since the entire crew are former Skanska and NCC employees. Some companies enter Sweden first by taking projects and later on build up their local organization, other firms do like us, we created an organization and later started to carry out projects. It’s important to have a local organization here; otherwise you will face a lot of problems.” (German contractor)

“The inflow of foreign firms is very positive; in addition to increased competition it may change the business climate by bringing new ideas like for instance new type of partnering agreements. The Swedish system is characterized by the fact that many in the industry know others in the industry. Change-over in the market, like buyers acting contractors and vice versa, is very common, as a foreign company it is not easy penetrating this market. The business climate is still very domestic. I believe costumers should invest more energy in finding foreign suppliers; after all they will be the ones ending up as winners.” (Lars Jagrén, Sveriges Byggindustrier)

The need for having a local partner was as well mentioned by a French contractor:

“From our point of view, coming to the Swedish market alone, it’s difficult, we must cooperate with a Swedish company. We are a bit reluctant to come alone, as a foreign company we do not know the market. We do not have our own office here and the project is controlled from Paris. We will go back when the project is finished; it is not a permanent establishment.” (French contractor)

Companies without local partners tend to exclude all the smaller projects. One German company stated:

“We only look at large projects here in Sweden, the amount should be around 200-300 million SEK or more. It’s impossible to get involved in small projects as long as we are mainly controlled from Germany. Of course if the company one day decides to buy a local firm here we may then even consider doing smaller projects.” (German contractor)

The Swedish market is generally considered very small. All interviewees mentioned the size of projects as an important prerequisite for entering Sweden. A question was made whether the companies were interested in reparation projects similar to Söderledstuneln” held by the Traffic Administration. One German company said:

“You mentioned Söderledstuneln (SEK 215 million), there are plenty of these kind of projects out there in Europe. For instance, a project like the City Tunnel is considered large in Swedish terms but in an international scale, it is not that large or unique.” (German contractor)

### **Stiff labour market and the shortage of resources**

The Danish company MT Højgaard is a major construction company in Denmark. The company constructed the Södertälje Bridge outside Stockholm; however the company chose to leave the Swedish market. In an interview, the representative of the company explained:

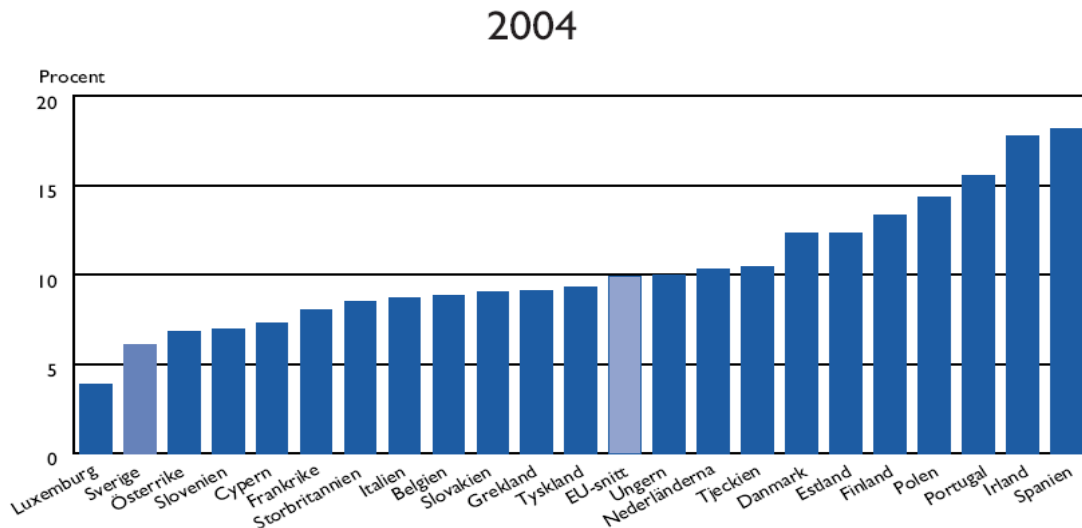
“I would say that the major obstacle or the major difficulties was to get local employees, the Swedish market is very different from the Danish market, the way you are employed in large companies, the last one who enters a company is the first one who goes out, that means getting hold of a experienced project manager is frankly impossible for us so we had to deploy our own project manager. All engineers and all the other employees are taken from our own workforce, we have only one local employee and she is leaving soon unfortunately.”  
(MT Højgaard)

The Finnish company YIT-Construction is another large construction company absent from the Swedish market. In an interview the company explained that for strategic reasons, it pays more attention to Eastern European countries such as Russia. The company has no plans to establish itself in Sweden because of other priorities and lack of resources.

## Home markets

Foreign construction firms have entered Sweden due to many different reasons. Some have chosen Sweden because of its proximity, however most of them came because of various construction crisis back in countries they are based.

Table 10 Construction as percentage of GDP in Europe



(Source: Adapted from the Swedish Construction federation)

The German construction crisis has brought many large companies like Bilfinger Berger and Hochtief to overseas markets ([www.dw.de](http://www.dw.de)). These companies entered Sweden by the same reason.

“The poor construction market in Germany the company’s home ground, made us eager to find alternative markets. Naturally, we looked at our neighbouring countries because of the proximity. We entered Sweden by attaining a good initial project, the Svinesund Bridge.”  
(German contractor)

The Finnish company Lemminkäinen (Lemcon) gave a similar reason for their establishment in Sweden:

“Finland faced an economical recession in the early nineties. As a result we began searching for new markets especially in our neighbouring countries, Russia and Sweden. At the same time the Swedish Rail Administration launched a number of large infrastructure projects here, that was how we entered the Swedish market.”  
(Finnish Contractor)

According to MT Højgaard the well performing Danish construction sector keeps many Danish companies away from foreign markets.

“We have not entered Sweden, since it has been the good construction market back in Denmark during the last years; only few companies have chosen international markets. Looking at the major players in Denmark, we are by far the largest company, last year we had only 21% of our turnover from the international markets. We had two other large players in the market, Skanska and NCC, Skanska has left Denmark and NCC has chosen to carry out mainly project development projects. E. Pihl & Søn A.S which is the second company in Denmark has 50% of their projects in international market.”  
(Danish contractor)

### **The procurement process**

Some parts of the tender process are considered as by the foreign companies. Early advertisement and information about available tenders have positive effects on the competition level. Lemminkäinen, the Finnish contractor is responsible for the renovation of Norrbro. Regarding the procurement process, the company believed:

“The costumers should inform us about possible interesting projects, much more in advance, sometimes we get the information only two months in advance and that is not enough.” (Lemminkäinen)

Another company raised the issue of time gaps that take place during the procurements. Many foreign firms are eager to receive faster information regarding the tender results. In Germany, Norway and in Denmark, companies get to know the preliminary tender results as early as a day after the opening of tenders. It enables a company to know at a very early point whether the submitted tender sum lays too much above other tenders, at equal level or maybe below other submissions. Depending on the case, the company is able to prepare its organization accordingly. A company could relocate or reprioritize its organisation in very early stages and prepare for other projects instead. However if the company anticipates a victory, it is ready to begin the work by the time the final results are ready.

The case differs in Sweden. Some clients may delay up to two months, before publishing the tender results. This creates inefficiency and submitting companies may lose other business opportunities during that time

The cost related to submission of tenders was another raised entry barrier. According to a German contractor, tenders cost huge amount of money for foreign firms. The costumers should therefore always offer some sort of payment or compensation in order to help the tenderers.

### **Standards**

One large German company raised the issue of Eurocodes, a European standard which describes the design method for buildings and civil engineering work. According to the company, Swedish clients often oppose using this standard method, preferring to use the Swedish national standard parameters. Nevertheless, by 2010 all national rules are to be replaced by the Eurocodes.

“We should be allowed to design constructions and installations according to the Eurocode, unfortunately costumers like VV and BV have both worked against this trend. If we want to use our German structure engineers at our German offices we need to use common European standards during the projects.” (German contractor)

### **The language barrier**

Maybe the most important market entry barrier of all is the language barrier. Today all clients, including the Traffic Administration of Stockholm require tenders to be submitted in Swedish. This creates a huge obstacle for the foreign construction companies. In general companies wish to use English as a primary business language.

Some Swedish clients, including Vägverket and Banverket have begun accepting certain information in English, but these documents are still second-graded in terms of legal importance. The contractors gave the following statements:

“We need to submit the tenders in Swedish; it makes the working process more complicated and slow. The translation process takes valuable time.” (German contractor)

“The language is the first large problem. Most of the projects we are involved in require Swedish as a main language. As a result it is much easier for Scandinavian firms to enter the market. All documents such as the contract, tenders and most the meetings are in Swedish and it creates a barrier. In some cases like in the “City-Banan” project in Malmö, the customer put a lot of energy in the translation process as a result documents and many meetings were done in English. A Swede and a German can easier negotiate at the same level and in a much better and fair way if the project language is English, they compete under the same conditions.” (German contractor)

“I believe that decision makers in our society tend to speak a lot about increased competition and opening up the markets but when looking down in various organizations you will face the opposite, an increased resistance regarding foreign influence of companies and unwillingness to use foreign languages.

If we want to attract foreign firms we need to let people speak English with each other during projects. We have seen in the “City-Banan” project that some documents are done in English, it’s very good though it is not enough, not only the specifications but also the complements should be done in English, otherwise it takes too much time for us. At present customers should increase the time limit for receipt of tenders in order to help foreign contractors, we need time to translate the documents.

I can accept the fact that the tender itself may be in English, however all other documents and supplementary material as well as annual reports, CVs and reference lists, daily meetings and conversations etc, should be allowed in English.” (German contractor)

## **7.5 Barriers of expansion for foreign firms**

### **The Swedish trade unions**

Some problems take place after the market entry, when a company wants to expand in the new country. Many companies consider the Swedish trade union as too powerful. Some certain laws and regulations create barriers for the foreign contractors. The maximum working hour’s law is seen as a barrier since foreign construction companies want to be able to work extra hours in order to travel home during vacations. Another problem is the number of dual payments such as taxes and insurances which companies have to pay in Sweden, despite the fact that they already pay the same fees in their home countries. One German contractor even saw the Swedish union laws as discriminatory against foreign firms.

### **Construction material**

At times, German contractors have faced difficulties in finding cheap construction materials and services in Sweden. In some cases, German contractors have been refused certain services or been offered extremely high prices. As a solution to the problem, clients have been forced to do the purchasing for some construction firms.

### **Cultural barriers**

Apart from other market barriers, soft factors such as cultural differences affect the foreign competition in a market. According to the German Swedish Chamber of Commerce, intercultural chocks do take place between German business people and Swedish clients. These soft cultural barriers create obstacles, since people are blinded by the fact that Sweden and Germany are geographically so close to each other.

Germans tend to be very strict and accurate regarding business relations. A German contractor usually expects procurement process and contracts to be extremely explicit, clear and well documented, everything is considered either black or white. By tradition, Germans always have their lawyers present in connection with contract signing agreements in order to avoid any mistakes. This could present a problem in relation to a Swedish actor who is not accustomed to bringing lawyers in to the negotiations in such a manner. The typical Swedish system of government is characterized by a flat organization which results in more rapid decision-makings since employees can make own decisions. On the other hand, responsibility tends to become too vague. The situation is very different in Germany. The German



organizational system is strictly hierarchical. As a result the distribution of responsibilities becomes clearer. The hierarchical system has often many different levels of heads of departments and heads of divisions (Mårten 2004). As a result Germans put much greater emphasis on titles and formalities, something which is often dismissed in Sweden.

The German-Swedish Chamber of Commerce pointed out a number of subjects that usually create problems in Swedish-German business in the field of construction:

- In Sweden, most architects do not have adequate knowledge in the field of civil engineering. In contrast to Swedish architects, German architects have much deeper knowledge in this field. As a result, it may create problems for the German contractors when they use local Swedish architects, at least for the first time. The German contractor may expect drawing that take structural factors into consideration and as a result, it could lead to various delays and misinterpretations between the Swedish clients and the German contractors.
- Swedish procurement frame works are considered too open and unspecified making room for diverse interpretations. In this regard, the German top-down system creates more user friendly procurement processes that are more regulated in terms of interpretation and fixed within defined frameworks. In a German procurement process, tenderers will know at a very early stage what the actual requirements will be.
- According to the Chamber, German construction companies use newer and better construction techniques compared to Swedish construction companies, at least in the housing sector. As a result, German construction companies take higher prizes which often exclude them from the market.
- German construction employees work under extreme time pressure during their limited stay Sweden. In comparison, Swedish worker do not work as fast, however they are put under tough pressure by the German project leaders. This sometimes creates complaint by the Swedish workers.
- German construction companies take their construction brake during the winter period. In Sweden, many businesses are closed during the summer period. This creates problems in terms of finding construction materials etc.

In order to overcome the cultural barriers, clients in Sweden should make frequent visits to sister clients and sister organisations in for instance Germany. A smart way of attracting foreign contractors is by learning more about the market condition in the countries from which these companies originate.

## 8 Discussion

### 8.1 The maintenance sector

There are many signs of high entry barriers in the park & street maintenance sector of Stockholm. Stockholm Entreprenad's market share has remained high and stable over a long period of time which is an evidence of weak competition (Konkurrensverket 2007). Mobility is another measuring tool for competitiveness in a market. According to Porter (1998) high entry barriers combined with low exit barriers create a dream case for already established companies. The survey shows that the contractors that produce street and winter maintenance services suffer from high market entry barriers. By comparison, there are no signs of specific exit barriers in the market, as a matter of fact reports show that many contractors risk being repelled from the market or go bankrupt due to severe public critique during hard winter, similar to those in 2001 (Svenska kommunförbundet 2003). As a result the market is characterized by a high concentration level.

According to the interviewees, many factors add up to the foundations of market entry barriers in the municipality of Stockholm, some are related to Stockholm Entreprenad. The size of SEAB, its large resources, its well-established reputation among clients, its knowledge of the municipal market, its proximity and access to storage and distributional locations and as well as the advantage SEAB has had because of its history as an municipal branch adds strongly to the barriers of entry for other competitors. In some cases, it's possible to say, Stockholm municipality due to its close and historic relationship with the SEAB has created various switching costs. This means a change to another contractor will add to the supplier's costs, at least in the beginning. Switching costs act as primary sources of entry barriers. Such circumstances create less bargaining power for the client, meaning it's harder to walk out these problems rather than avoiding them. The contractors are reluctant to invest in the street and maintenance sector since it is considered as too difficult and risky.

In general, these barriers correspond very well to Porter's (1998) list of market entry barriers, which include the economies of scale, product differentiation, capital requirements, switching costs, access to distribution channels and the affect of government policies.

What should the Traffic Administration do in order to reduce the barriers of market entry and reach the level of maximum cost efficiency? In the following pages, a number of solutions are discussed.

#### **The duration of the contracts should be long enough**

A client is able to produce good suppliers if it creates the right type of conditions in the market. The short contract periods are seen as obstacles. Longer contracts create incentives for investing in more risky projects. As depreciation periods for new machinery are at least five years, contractors need to calculate the risks involved. From the contractor's point of view, longer contract periods mean less risky business. However, some believe getting rid of bad performing suppliers will become more difficult if longer contracts are introduced. Longer contracts may as well result in increased switching costs from the client point of view. According to sources in the Traffic Administration, there is a trend moving towards contract periods of four years. This would be a step in the wrong direction according to the contractors. A long contract period also means closer relationship between clients and contractors as well as help keeping the administrative costs down by reducing the workload. Longer contract periods increase market predictability.

**The client should promote standardization in the procurement process and create better predictability by providing earlier information to the market. Client- market dialog should be stimulated**

In general, companies seek greatest possible predictability. From a market point of view it is considered as a tool for stimulating innovation in a market.

“If firms are uncertain of tomorrow’s demands in public procurement, they may find it too risky to do so. Hence, better predictability may stimulate innovation in the right direction.” (Copenhagen Economics, 2007, page 6)

The districts received a lot of critique for the way they designed the specifications. According to the interviewees specification designed by the districts were all dissimilar in terms of content and design, making them too complicated and unintelligible. Even though the problem was improved in the latest procurement round, it would be a good idea to further investigate on the issue in order to avoid similar problems in future procurements. The problem also demonstrates the inefficiency of decentralizations in some organizations. As mentioned in the interviews, a company chose not to submit tenders due to these problems. It is very important to have well standardized documents which help increase predictability in projects resulting in lower risks for both contractors and clients. The client may also use standardization as a tool for avoiding switching costs; the more uniform procurement processes are, the less will the customer adapted serviced become (Porter 1998). Standardization also promotes the inflow of SMEs (Loader 2007).

**Contract sizes should increase in areas in which there is a lack of competition**

SME-promotion, socio-economic goals, transparency, regulatory compliance, cost-efficiency, regional development and optimal quality are some factors that public clients need to take into consideration during procurements. It is believed that cost efficiency and optimal quality are the competing factors. However the problem is that some of these factors, such as cost efficiency and SME-promotion collide with each other. The client should raise the question whether the target is to attract more suppliers or becoming more cost efficient.

Until today, many discussions have centred on how to split up the contracts and make smaller areas in order to attract more SMEs. With regards to street maintenance, smaller areas could attract more SMEs, at least in non winter activities. However this would result in an increased administrative work load for the clients, unless the number of employees is increased.

A negative aspect of splitting up the areas is probably the fact that contractors such as Vägverket Produktion, Skanska and NCC (Which are absent from the market today) would become more reluctant in submitting tenders. During the interviews the large companies mentioned the size of contracts as an important factor when considering carrying out projects. One large company absent from the Stockholm market suggested that contracts worth SEK 20-25 million per year would be a reasonable level of for contracts. According to the big companies, large contracts are more profitable. Larger contracts also mean fewer contracts/specifications resulting in easier analysis of the specifications.

The interviews showed, especially as winter maintenance is concerned, that mainly the larger companies have the adequate technical capabilities and as well the interest of producing street maintenance services. According to the interviewees, only larger companies have the capacity of dealing with the complicated Stockholm inner city market, at the same time, smaller firms do not show any particular interest in the street maintenance sector.

The interviews covered both large and small companies. The smaller or the middle sized firms tend to be more interested in smaller areas. Smaller firms are in general more interested in producing various park services.

The competition was slightly improved in the latest round of procurements in 2008; as a result, Vägverket Produktion was awarded two new contracts, which were formerly maintained by Stockholm Entreprenad. According to the Traffic Administration, clearer and more standardized specifications resulted in better competition. However, regarding the competition, the number of tenderers improved in the outskirts of the municipality while the inner-city districts such as Södermalm, Kungsholmen and Östermalm remained uninteresting for the tenderers. The question is whether the city's current policies regarding SME-promotion has been right or wrong? Should the municipality continue the idea of attracting smaller maintenance companies especially in the inner-city areas? During the interviews, it was to a certain extent confirmed that street maintenance, especially in the inner city districts is too complicated and sensitive in order to be carried out by smaller companies. In accordance with this, the Traffic Administration should instead put more effort in attracting larger maintenance companies, since these are absent from the market as well. One solution would be to increase the size of some inner-city contracts such as Södermalm, Östermalm and Kungsholmen. As seen in table 2 and 3, Stockholm Entreprenad became the contractor in these areas. Increased contracts volumes would make these areas more lucrative for larger companies; tenderers that are not present today could become more interested as a result. Regarding the risk, the competitive situation cannot develop into worse than the present state today, only a single tenderer is interested in maintaining these areas. Regarding the SMEs, an increased number of large scale companies will result in new subcontractors. This means that many of the SMEs will nevertheless get hold of the projects, by becoming subcontractors.

#### **Using combinatory tenders**

The usage of combinatory tenders could be another solution to the competition problem among tenderers in the inner-city areas. This procurement method has successfully been used by the Swedish Road Administration, Vägverket. As mentioned in the earlier chapters, as neither Skanska nor NCC, both large companies, are present in the municipality market due to various reasons. By offering larger volumes of contract combined with longer contract times, the client will lay the ground for increased competition among tenderers, mainly larger companies.

Combinatorial tenders will enable contractors to either submit tenders covering a combination of contracts or limit themselves to single/smaller contracts. This procurement method may increase the competition from large companies subject to economies of scale while at the same time allowing tenderers to submit offers for smaller areas. The tenderer that offers the lowest combinatorial price will get the project.

#### **The idea of dividing larger bus routes and smaller traffic routes apart should be further investigated**

An average street maintenance contract usually includes all types and sizes of roads and streets aimed at serving all types of traffic. However, according to (Brandén 2006) a removal of the bus network from the ordinary street network would increase competition among tenderers. This functional division enables small or specialized firms to take responsibility over the smaller streets. As large companies are concerned, they have all the necessary routines and required resources in term of machines, enabling them to use their larger machines for maintaining the larger streets, named the bus routes. Most interviewees were positive to this idea without knowing the further details. From the larger contractor's point of view, the idea would be interesting as long as the volume of the contracts would be keep at an adequate large level.

A company specialized in parks suggested a similar idea; nevertheless the smaller routes would as well include winter maintenance of parks. It would mean that a smaller company

could carry out activities both in smaller routes, parks and at the same time have responsibility over the winter maintenance of parks.

The idea was however discouraged by some personnel in the Traffic Administration, as it could generate problems in terms of logistics and allocation of responsibilities.

### **Fewer specifications should be released at the same time**

All interviewees complained about the large number of simultaneously released specifications. However, the Traffic Administration is aware of these circumstances; the problem will be hopefully solved in future procurements. Copenhagen Economic (2007) points out the following regarding the number of specifications, It argues that the release of too many specifications generally have a negative impact on tender competition.

”... sequencing of contracts is a problem for SMEs. It may be appropriate for public procurers to let the tenders appear with a frequency that make it easier for such firms to participate and submit bids.”

” Sufficient time between the tender phases (announcement, time limit of tender, decision, start of delivery) is often a prerequisite for the participation of SMEs in public procurement. “

(Copenhagen Economics , 2007, page 31)

### **Storage locations should be provided by the client**

According to the interviewees access to storage locations is an important factor. The lack of storage locations is a major problem for contractors in Stockholm. In Norway, the city of Oslo forces contractors to rent its storage locations, even if the companies already have access to their own areas. The Oslo model is interesting since it makes the competition fairer. This system is not being implemented in Stockholm because of lack of properties. The city should put more effort in finding appropriate storage places for its suppliers.

According to ISS Landscaping, one of the maintenance contractors of Oslo, the street maintenance sector is very profitable in Oslo. However, the reason for it was not given.

### **Fines scare contractors**

Where fines are concerned, they are used as an efficient tool by the client against possible mismanagement by contractors. However, the question is whether a bonus system could be developed at the same time to serve as an incentive for improving quality. Pure fines tend to keep potential bidders away from the tenders.

### **The economic boom**

The economic boom serves as a source of barrier of entry, in the street maintenance market. Increased investments in the classical construction sector have turned the attention away from the maintenance market towards classical building projects. Contractors such as Skanska and NCC prefer being involved in construction activities rather than producing maintenance services such as snow removal. These companies have normally activities in both sectors, on the other hand, construction is much more profitable in comparison to maintenance.

As mentioned earlier, the client should instead of focusing on SMEs attract the large contractors since only they are able to carry out street maintenance in the central parts of Stockholm, however the competition may remain low as long as the construction boom continues.

Some interviewees saw the relation between the clients and SEAB as a barrier. One company even believed that some clients in the municipality have until today designed the

specifications according to the needs of Stockholm Entreprenad. There are many reasons for this line of thought, the first could be Stockholm Entreprenad's long history as a contractor in Stockholm municipality, creating switching costs both for itself and the client.

As its main client/market, Stockholm Municipality is vital for SEABs business, as a result it naturally needs to stick with its customer. However, from the client point of view, SEAB has for a long period of time carried out customer adapted service for the city, making the city very much reliant on Stockholm Entreprenad. These specific circumstances may lay the foundations of switching costs, in this case both among the client and the contractor. A change of contractors will in the short term mean increased switching costs both for the contractor SEAB and the client.

### ***The client should introduce new compensation methods***

In general, companies considered the conditions of payment as problematic because of difficulties in covering their fixed costs. The city has two different methods of payment, one in the inner city area and another related to the outskirts. Also, the conditions of payment differ depending on the type of activity; snow clearance and ice control have different conditions of payment. According to one company, the conditions of payment for snow had improved in the latest procurement round. On the other hand, as ice control was concerned, the problem still existed. The interviewee believed all payment methods should turn become similar to snow clearance compensations.

In general most companies preferred other types of agreements rather than those used today, contracts that reduce the risks, or distribute the risks between clients and contractors are most popular. As a specific example, one contractor argued that the "Sollentuna model" is a good compromise. Several companies also pointed out the need for regulating compensation according to the number of departures rather than number of hours.

## **8.2 The Public works sector**

The interviews with the various foreign firms, associations and authorities gave a fairly clear picture on the barriers which exist on the Swedish construction market. Sweden is a good market for foreign companies but it is a relatively small market, therefore, clients need to be mostly attractive in order to attract the foreign construction companies. There are a plenty of similar projects across other European countries, in other word foreigners don't have to enter the Swedish market.

In recent years, the construction boom has resulted in numeral of very large construction projects, mainly related to infrastructure developments in the capital, Stockholm. However, Swedish construction companies are today working over capacity resulting in less competition in public procurements. According to the Swedish Competition Authority (2007), the number of tenderers in public procurements has had a negative trend in recent years, especially in the infrastructure sector.

The low participation in the public procurements has many different causes. First of all, major infrastructure projects are usually very resource demanding, as a result only the largest companies can take on such projects. At the same time, the Swedish construction market is hugely dominated by a few very large companies while the remaining ones are relatively small in terms of size and resources. As an example, Skanska, which is the number one construction company in Sweden, had in 2006 more turnover than the sixth to the fiftieth largest construction companies together (Byggfakta 2007). At the same time, many smaller companies are often taken over by the larger firms resulting in an increased market concentration. For those foreign construction companies that are interested in the Swedish

market, these circumstances cause problems and barriers of market entry. However, these issues tend to differ in terms of complexity and nature, some are more related to cultural issues while others are more of a hard nature, related to rules and regulations, yet both problems play important functions as barriers of market entry.

The interviewees were made up by contractors, clients and interest groups all in contact with international construction projects in Sweden. A large number of foreign construction companies were interviewed as well as important establishments such as the German Swedish Chamber of Commerce. Various interviewees mentioned issues seen from their point of view. The large mixture of interviewees displayed an interesting picture, illustrating the tough market foreign construction companies are facing in Sweden.

Based on the problems mentioned by the various interviewees, a number of suggestions are made in the following paragraphs.

#### **Client may help foreign firms finding local partners**

The Swedish infrastructure construction sector is extremely concentrated resulting in the lack of competition. These circumstances serve as barriers of market entry for most foreign companies. According to Porter (1998), established companies have access to the logical distribution channels in the market. A new entrant has to discover these channels in order to distribute its services, sometimes by persuading the market by the help of price breaks and advertisements. However, the more established players present in the market, the harder it will be for new companies to enter it. Porter argues that too high entry barriers at times result in the creation of entirely new distribution channels by the entrants.

These distribution channels could as well be characterized by the access to local partners and knowledge. Apparently, according to the foreign companies themselves, it is more or less impossible to establish a business in Sweden without a Swedish partner. Customers should shoulder greater responsibilities by helping newly established foreign companies with local regulations and practicalities. One solution could be to find local partners, premises as well as offering easier but time consuming practical services.

#### **Clients may introduce new types of contract agreements reducing the risks both for themselves and the contractors**

Many foreign interviewees mentioned the need for creating incentives in order to attract foreign construction companies. By offering other types of contract, such as various partnering agreement or PPP (Public Private Partnership) contracts, foreigners would more easily come to Sweden. New type of contracts may result in less expensive and more efficient projects, as an example, partnering projects enables the contractors to carry out both large and small projects, since the risks are reduced (Danish contractor). The implementation of various partnering agreements may also strengthen the mid-sized companies in Sweden, in case of being joined with foreign firms (Lars Jagrén). The Traffic Administration may as well look at other types of procurement processes. As mentioned in an earlier chapter, the combinatory tender method was used by the Swedish Road Administration and the results were very successful. By implementing new ideas, clients may attract more tenderers during early stages of various projects.

### **The client should shoulder more responsibility in order to attract foreign contractors**

Foreign contractors as well as some Swedish clients all mentioned the difficulties in buying construction materials when being a foreign company. For many local companies, foreign contractors are seen as new competitors imposing a serious threat. As a result some local companies tend to use protectionist methods in order to keep their market shares.

With this in mind, the client could take on further responsibilities for instance by buying construction materials, this act would as well make the contracts much more attractive. By taking over the purchasing responsibility from the suppliers, clients may experience the positive sides of backward integration, resulting in better customer bargaining power. (Porter 1998)

### **The client should promote standardization as well as creating predictability for its suppliers**

Various standardizations make the procurement processes more attractive and rational. For instance client should accept the use of Euro codes in the design phases (German contractor). Other standardizations can be homogenous specifications, contracts and working methods etc. Porter mentioned, if the buyer becomes too dependent on engineering help and training from the supplier or if the buyer receives too much customized service from the suppliers, the buyer automatically creates switching costs. Switching costs can be avoided by the promotion of standardization, as a result, the buyer will be able to reduce product differentiation among its suppliers as well as increasing its bargaining power.

One foreign contractor believed it would be a good idea to decrease the answering time during the tenders. In Sweden, clients keep this process very confidential until the very last day; the question is whether or not this should be changed?

### **The client supplier/market contact should increase**

As projects are concerned many interviewees, both Swedish and foreign contractors complained about the lack of early information. Entering a new project requires a lot of recourses as well extensive time planning. However, many foreign firms believe the time limit is often too short. A client could for instance arrange information seminars in order to make bridges between Swedish companies and foreign contractor. The clients in Sweden should as well increase their contact with their sister clients in other countries (German Swedish Chamber of Commerce).

According to the Stockholm Chamber of Commerce, information about future criteria's has a large impact on the participation of SMEs. Nevertheless, it corresponds as well with the needs of foreign construction companies in Sweden. When German contractors submit tenders in construction procurements, many companies tend to offer too high prices because they are not really familiar with the Swedish criteria's. Swedish specifications and procurement documents are in general seen as too broad and unspecified. These circumstances serve as barriers of entry for the foreign tenderers as well as preventing the inflow of SMEs in general. By improving the communication between clients and contractors/market, these problems will soon fade away.

### **Cultural barriers should be taken under consideration**

The issue of vague and unspecific specifications could also be seen as a cultural phenomenon. Some factors in Swedish business culture collide with the culture foreign companies bring with themselves. Even though these soft issues are not very important in the long term, in the short term, the cultural barriers may as well prevent foreign companies from entering the market. Interviewees mentioned several factors which they considered as possible cultural barriers, mainly between German and Swedish businesses. Many of these differences may



easily be solved good communication as well as education, study tours and seminars. Apart from contacting foreign firms, clients in Sweden should as well increase their partnership with corresponding clients in other countries in order to learn about their client culture.

### **Labour policies**

Labour policies are considered a significant part of the problem regarding entry barriers for foreign construction companies. However, it is very difficult to affect these regulations since the power of action does not lie in the hands of clients, on the other hand, by at least being aware of the issues, clients may help their suppliers in other ways. Porter (1998) describes governmental regulations as one of the barriers of entry.

### **Procurement language**

Where language is concerned, foreign companies face huge difficulties when submitting tenders or reading the specifications because most documents are in Swedish. How can we attract the foreign firms if we force them to use Swedish as the project language? The language problem is perhaps the most important issue when talking about barriers for foreign construction companies.

Translation of the collective agreements from Swedish to other languages is another important issue. The translations of legal documents are very important because, a foreign company must sooner or later get in touch with these documents (Lars Jagrén).

Finally, it is possible to argue that foreign competition in the Swedish construction market would benefit the industry, as it will both increase the competition and in addition bring new construction technology.

Historically, foreign construction companies enter new countries/markets when conditions at home are bad. This means that some foreign companies may as well leave the new market as soon as their home markets recover. Scandinavia today hosts a number of medium- and large size construction companies. However, many are still not established in Sweden because of various reasons. As an example, the Danish company MT Højgaard and the Finnish YIT Construction are both fairly large companies but neither of them are established in Sweden. MT Højgaard mentioned the good construction climate in Denmark as one reason for not entering Sweden while YIT Construction described the large Eastern European market as an explanation for not being present in Sweden. This shows that many construction companies do not prioritize Sweden despite the proximity factor.

## 9 Conclusions

The main propose of this thesis was to analyse the level of competitiveness in procurements processes handled by the city of Stockholm Traffic Administration. The paper was divided into two areas. The first area was related to streets & parks maintenance procurements. In this part the bidding trends among competing firms were analysed and the barriers of market entry were surveyed.

In the second part the same procedure was done, however, the main focus was barriers for market entry regarding foreign construction companies. The results were based on a large number of interviews, mostly with various contractors in each respective field.

Where streets & parks maintenance is concerned the following conclusions were made. The Municipality of Stockholm does not have an adequate level of competition in its maintenance procurements. However, the situation is slowly starting to improve and the trend can be seen as positive. According to the interviews, there are several factors creating barriers as well as keeping tenderers away from the procurements:

- The maintenance market in Stockholm Municipality is still very concentrated and the contractor, Stockholm Entreprenad has a dominant role on the market
- Street maintenance in the inner city areas of Stockholm are considered too complicated and unprofitable. For maintenance companies, it is easier to work in the outskirts of the municipality rather than in the inner-city, the reason is smaller quantity of traffic and less street networks. The central parts require a lot of organisational as well as financial recourses, which most companies in Stockholm do not have.
- As street maintenance is concerned, winter upholding is the most problematic element. These activities are according to the contractors themselves too risky and many contractors perceive the compensation criterias as non suitable. Many maintenance firms tend to avoid winter street maintenance in general.
- Small companies are not interested in street maintenance, especially the winter maintenance part. The only companies that are able to do street maintenance in the central parts of Stockholm are the larger companies. As a result, the client should either create larger contracts or implement the combinatorial tender system in order to increase the competition in these areas. Large companies such as NCC and Skanska can be attracted if they are given the right incentives.
- The short contract periods serve as market entry barriers. In order to attract contractors, the Traffic Administration needs to offer longer contract periods, resulting in lower economical risks. For the contractors.
- The client needs to improve its communication with the market in order to promote predictability and market knowledge. The client also needs to pursue its work in terms of standardization of specifications and tender documents.
- The lack of storage locations is a significant market entry barrier. The city should solve this issue by allocating special lands for this particular purpose.

The other part of the thesis described the public works sector; more specifically it analyzed what entry barriers exist for foreign construction companies in Sweden. When looking at the public works it is quite evident that this sector is largely dominated by large Swedish construction companies, and the numbers of foreign tenderers are almost nonexistent (during the time of study in the Traffic Administration). The following conclusions were made:

- The Swedish construction market is dominated by a few large companies. As a foreign company, it is hard to penetrate this market without local partners. The client is able to help its suppliers by finding local partners in Sweden
- The Swedish Trade Unions are too strong; the foreign construction companies perceive some parts of the collective agreements as discriminatory.
- Information regarding various project must be published sooner, foreign companies complain about the lack of time in many projects, making analysis of specifications very hard.
- Standardization, predictability and clear specifications promote both the inflow of Swedish SMEs as well as foreign construction companies. The establishment of international companies itself may also help promoting Swedish SMEs since they are able to enter partner agreements with the foreign companies.
- Sweden is a small country with a relatively small market, as a result it is not easy to attract all the foreign construction companies to the country. Because of this, clients need to take an active part in the promotion of projects and the attraction of foreign construction companies. One important factor is cultural differences, client need to put more effort in analyzing and learning about these aspects.
- The Traffic Administration should shoulder more responsibilities in helping its suppliers, for instance it could offer foreign construction companies with their purchasing of construction materials.
- According to all interviewees, Swedish as a project language is a serious barrier for attracting foreign construction companies. The Traffic Administration needs to establish English as a project language in those cases in which foreign companies are addressed.

Even though maintenance and public works are two very different sectors, this study has shown that they share many common problems, which could be solved using the same practical methods. In accordance with this, the Traffic Administration or any other public client may be able to increase competition by listening to the market and eliminate its entry barriers; as a result additional tenderers will be attracted bringing about more efficient use of tax money.

## 10 Proposal for future research

### **The maintenance sector:**

Lack of storage locations is an important market entry barrier. How can the municipality of Stockholm solve the storage locations issue?

### **The public work sector:**

The language barrier in procurements is a serious barrier of market entry. How can it be solved practically with lowest complications as possible?

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5. Liselott Löf
6. Svensk Markservice AB
7. Skanska drift
8. NCC Construction AB
9. Samhall
10. Oslo municipality
11. Stockholm Traffic Administration
12. ISS Landscaping Oslo
13. Skanska AB
14. Bilfinger Berger AG
15. Vinci Construction S.A
16. Hochtief AG
17. Z blin Scandinavia AB
18. MT Højgaard A/S
19. YIT Construction Ltd
20. Lemminkäinen Oyj
21. Sveriges Byggindustrier
22. Vägverket
23. Banverket
24. Stockholm Business Region
25. Tysk-Svenska Handelskammaren
26. Metze Bau GMBH

## Procurement documents

### Maintenance unit

2008 (street maintenance):

Tilldelningsbeslut vid upphandling: Hässelby/Vällinby  
Tilldelningsbeslut vid upphandling: Vällinby centrum  
Tilldelningsbeslut vid upphandling: Spånga/Tensta/ Rinkeby  
Tilldelningsbeslut vid upphandling: Hägersten – Liljeholmen  
Tilldelningsbeslut vid upphandling: Östermalm  
Tilldelningsbeslut vid upphandling: Kungsholmen  
Tilldelningsbeslut vid upphandling: Vantör  
Tilldelningsbeslut vid upphandling: Kista

2007(street maintenance):

Tilldelningsbeslut vid upphandling: Kungsträdgården & Berzelii park  
Tilldelningsbeslut vid upphandling: Årstafältet  
Tilldelningsbeslut vid upphandling: Södermalm/Södra HH  
Tilldelningsbeslut vid upphandling: Skärholmen

Tilldelningsbeslut vid upphandling: Farsta  
Tilldelningsbeslut vid upphandling: Skarpnäck  
Tilldelningsbeslut vid upphandling: Årsta

2003-2006 (Park & Street maintenance):

Tilldelningsbeslut vid upphandling: Östermalm  
Tilldelningsbeslut vid upphandling: Kungsholmen, two contracts:  
Tilldelningsbeslut vid upphandling: Vantör  
Tilldelningsbeslut vid upphandling: Kista  
Tilldelningsbeslut vid upphandling: Hägersten  
Tilldelningsbeslut vid upphandling: Älvsjö  
Tilldelningsbeslut vid upphandling: Maria-gamla stan  
Tilldelningsbeslut vid upphandling: Norrmalm  
Tilldelningsbeslut vid upphandling: Liljeholmen district area  
Tilldelningsbeslut vid upphandling: Västerled  
Tilldelningsbeslut vid upphandling: Bromma  
Tilldelningsbeslut vid upphandling: Enskede

### **Public works unit**

2006-2008:

Tilldelningsbeslut vid upphandling: Mikrofonvägen, Telefonvägen  
och Hägerstensåsen Omisolering och reparation av betong.  
Tilldelningsbeslut vid upphandling: Liljeholmsbron och Östra bron  
Tilldelningsbeslut vid upphandling: Skanstullsbron, Trafikanordningar  
Tilldelningsbeslut vid upphandling: Södermalm Busshållsplatser, trottoarer  
Beläggningsarbeten, dagvatten  
Tilldelningsbeslut vid upphandling: Norrmalm/Kungsholmen, Busshållsplatser, trottoarer.  
Beläggningsarbeten, dagvatten  
Tilldelningsbeslut vid upphandling: Östermalm Busshållsplatser, trottoarer, beläggningsarbeten,  
Dagvatten  
Tilldelningsbeslut vid upphandling: Bredäng centrum  
Tilldelningsbeslut vid upphandling: Götgatan fas 3, cykelvägar  
Tilldelningsbeslut vid upphandling: Vägkonstruktion, kv. Siktet och kv.vattenpasset  
Tilldelningsbeslut vid upphandling: Nordsyd-axeln, norra delen  
Tilldelningsbeslut vid upphandling: Norrbro  
Tilldelningsbeslut vid upphandling: Skanstullsbron, Trafikanordningar  
Tilldelningsbeslut vid upphandling: Liljeholmsbron Omisolering

## Appendix 1

The largest tenders at the City of Stockholm Traffic Administration 2006 to 2008, (above SEK 5milj)

Year	Project	Winner	Other tenderers
2006	Mikrofonvägen, Telefonvägen, Hägerstensåsen, omisolering och reparation av betong.	E-schakt	NCC DAB
2006	Liljeholmsbron och Östra bron Omisolering	E-schakt	NCC SVEAB PEAB DAB
2006	Skanstullsbron, Trafikanordningar	NCC	E-schakt, VV- Produktion,
2006	Renovering	NCC	NCC
2007	Södermalm Busshållsplatser, trottoarer Beläggningsarbeten, Dagvatten	NCC	Info saknas
2007	Norrmalm/Kungsholmen Busshållsplatser, trottoarer Beläggningsarbeten, dagvatten	NCC	Info saknas
2005	Östermalm Busshållsplatser, trottoarer, beläggningsarbeten, Dagvatten	SH-Bygg	Info saknas
2006	Bredäng centrum	NCC	JM SH-Bygg Peab Grävbolaget
2006	Götgatan fas 3, cykelvägar	NCC	NCC Skanska Bäckströmskew
2005	Vägkonstruktion, kv. Siktet och kv.vattenpasset	SVEAB	NCC
2007	Nordsyd-axeln, norra delen	NCC	NCC
2007	Norrbro	Lemcon Ltd Finland	MJ Entreprenad, SH-Bygg, Lemcon Ltd Finland, Hercules grundläggning, Peab
2006	Skanstullsbron, Trafikanordningar	E-Schakt	VV-produktion, E-Schakt
2006	Liljeholmsbron Omisolering	E-Schakt	E-Schakt, NCC DAB Domiflex, WaterJet, SVEAB AB, Peab