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A Decade with the Oresund Bridge
Oresund a critical review on cluster and regional development

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Declaration of Research Work Integrity

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature of any degree. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by giving explicit references. A bibliography is appended.

By signing the present document I confirm and agree that I have read RU”s ethics code of conduct and fully understand the consequences of violating these rules in regards of my thesis.

Copenhagen May 25th 2012 280581-5859 SIGN
Abstract

For the last couple of decades Clusters theories have gained increased attention from both scholars and decision makers. This thesis will use those theories to analyse the Oresund region, which is situated at the border of Sweden and Denmark. As the region went through major transformation at the turn of the century when a bridge was opened between the two countries creating a single market is was considered an interesting unit of analysis. Porter’s Diamond was applied using both qualitative and quantitative methods to look at the regional development since the opening of the bridge, both in terms of successes as well as troubles. The major successes of the integration have mostly to do with increased strength of factors while shortcomings have to do with lack of cross border networking. These problems were then further analysed using alternative frameworks such as regional innovation, agency and network theories.

Keywords: clusters, regional innovation systems, regional identity, agency theory, networks
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Introduction

One of the buzzwords of international business today is surely ‘clusters’ which has gained the interest of governments, scholars and media. The phenomena aims to explain how certain industries cluster together within a certain region. Some famous examples of these include; Hollywood for the film industry, Silicon Valley for software, The City of London for finance and the fashion clusters of Northern Italy. With increased integration of the global economy, lower transportation cost and the introduction of the Internet, innovative regions have become more important to the surprise of many (Krugman, 1991). Certain logic would say that location should matter, but with all these new tools that doesn’t appear to be the case (Porter, 1998). Scholars have taken notice and big contributions have been made in the past quarter of a century toward a greater understanding (Lublinski, 2002).

Interest of Scholars:


The former had taken notice that businesses agglomerated together and theorized about why this was, many of these theories still hold true today, more than a century later. The latter brought the concept back into the limelight and as a result of his research scholars and policy makers took notice. Porter’s Diamond model has greatly contributed toward explaining clusters. Building on Marshall’s and Porter’s work much research has been done towards explaining clusters. Still many aspects of it are still unclear and a big constant theoretical debate on elements of cluster ranging from methodology to political policy making (Schmeideberg, 2010).

Porter’s Diamond has provided researchers with a framework to analyse clusters. These are four forces that interact with each other along with two external factors government and change that influence the Diamond without being part of it. These factors have different composition between economies that together determine the strength of a
cluster. The Diamond will be used as a framework for this thesis and discussed in detail in the theoretical overview.

**Interest of Policy Makers**

With the success of among others, Silicon Valley and Michael Porter’s book the interest of policy makers was sparked. According to an advisor in the field of cluster development it is not uncommon that policy makers ask for “their own Silicon Valley”\(^1\). Furthermore respected institutions such as the OECD and the World Economic Forum have taken a great interest in the phenomenon for their members along with individual states in USA and the European Union to name a few. Many of the programs that have been set up, aim to increase innovation and knowledge intensive work within a given region. Proximity is another subject as some of the regions set up parks where innovators can come together and possibly spawn great inventions. Governments spend large amounts of money to create an environment where innovations are likely to be born using counselling company such as Interlace-invent which has advised on projects in Cataluña, Taiwan, Shanghai, Portugal and for the Nordic Counsel (2009).

The purpose of clusters is generally to (Gestrelius & Oerum, 2005, p. 1):

- Fostering networks and establishing networks between industry and academia
- Encouraging and facilitate innovation and knowledge creation
- Promoting regional identity
- Assisting and expansion of existing firms,
- Attracting new investment and talent to the region
- Promoting exports

**Problem formulation**

As a part of the authors master’s program the concept of clusters has been discussed on a number of occasions in different courses. The combination of knowledge transfer, innovation and management among others seemed interesting and curiosity about its mechanism drove the interest in writing a master thesis about the subject. What was lacking was a perspective. After moving to Copenhagen the integration of the city with Malmo on the other side of Oresund seemed to be an interesting subject. Despite the

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\(^1\) Jesper Rasmussen PhD – oral source
rich history of the region the biggest step in its integration was with the building of Oresund-bridge in 2000.

This decision set the geographical scope but still there were questions as how to research the region. For that Porter’s Diamond was introduced as it is a tool to determine the strength of different forces in a given location. To begin with analysing the competitiveness seemed feasible but both Denmark and Sweden are analysed every year by the World Economic Forum in their Global Competitiveness Report (2010). Such an analysis would therefore add little to existing literature.

The opening of the Oresund-bridge was an interesting economic experiment as the two regions strengthened their bonds with a few kilometres of asphalt. With it the two regions, that had until then been relatively independent of each other, became one. To quote one of the most popular pop songs of the last century, they became “one but not the same” (Bono, The Edge, Mullin, & Clayton, 1992). That is to say that though both regions have independent economies with different policies, laws and so forth, they still share labour, capabilities and infrastructure. A company on one side can therefore use the resources and capabilities on the other.

Research question
The research started out to investigate how this integration has strengthened (or weakened) in the region. As mentioned the Diamond model can help identify these forces and it was used as a guiding framework as cluster policy has been “seen as a powerful instrument at the intersection between regional and industrial policy” (Schmeideberg, 2010; p. 389) and the research question therefore the following:

*How has the Oresund region strengthened with increased integration?*

The Diamond model was used to measure the region but the word “cluster” or more precise “industrial cluster” was knowingly left out of the question for a number of reasons. First its definition particularly when it comes to the unit of analysis is subject to debate. In his book Porter uses countries as a unit of analysis while others have looked at cities or regions. Initially it appeared interesting to analyse only the Copenhagen and Malmo area as most of the value creation occurs there but since most of the available data and institutions focus on the entire Oresund region, choosing
another unit of analysis would have been problematic. This will be explained in the theoretical review.

The initial intent was to study the Oresund region with all its industries but since the term cluster refers to only one particular industry within a given geographic and concentrated area the initial scope to be adjusted. A number of different clusters can therefore be situated within the same geographical area. New York for example has many clusters, advertising (Fifth Avenue) and finance (Wall Street). The region in question may therefore have some factors that are good for one industry but not another. The Diamond will be explained in detail in the theoretical review and how that model is applied, discussed in the Methodology chapter.

The question has a certain before-after effect. The possibility of looking at and comparing two time periods, as if they were still pictures, was considered but eventually rejected. Still it is noted that the biggest step toward increased integration was the building of the bridge. The research will look at how the united area is stronger than it would be separately, however the analysis will look at current position, sometimes in an evolutionary perspective. These issues are considered by Schmeideberg (2010, p. 391) who talks about some of the main challenges of evaluation being “the definition of a control group, the identification of measurement of effects and side effects”. To help identify which results are due to the integration of the two regions and which are due to external factors, other cities in Scandinavia were chosen as a control group. To take the example of the airport a certain comparison is necessary, for that purpose comparing with Stockholm was helpful. For example a high increase in air travel from Copenhagen airport could be due to a general increase in travel, comparison with Stockholm should clarify how much of the increase can be considered as natural.

As mentioned Porter’s Diamond has provided researchers with a framework to research clusters in a simple way. In this research this framework will be used.

**Definitions**

Some definitions are necessary before going further. These will be relatively short since the theoretical review will look closer at some aspects that are necessary for the research.
Concepts

Porter’s definition of the phenomenon is as follows:

   Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. (Porter, 1998b; p 78)

To leave nothing out the explanation of what is included in a cluster Porter goes on to say:

   They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally, many clusters include governmental and other institutions - such as universities, standards-setting agencies, think tanks, vocational training providers, and trade associations - that provide specialized training, education, information, research, and technical support.”(Porter, 1998b; p. 78)

In Porter’s book, Competitive Advantage of Nations, originally published in 1990 a broader tone is used and the emphasis is on whole nations. The phrase ‘geographic concentration’ is a fairly vague concept and gives little indication of actual size therefore the unit of analysis will be discussed in the theoretical review.

In later years a number of researchers have investigated clusters with many definitions of the concept. They agree for the most part that clusters entail companies in a common location that are either connected or in similar industries. An overview of definitions can be found at Lublinski (2002) who divides cluster identification techniques into two categories geographical and functional. Different theories propose methods to calculate agglomeration.

Regional innovation systems look at the same phenomenon with a different viewpoint, examining the interplay between the firm and the environment to create innovations. In essence location factors, policy and the overall firm environment create the firm’s
innovation behaviour in interplay with the firm itself. These theories will be looked into in the theoretical review.

Agglomeration is a concept fairly similar to clusters. However it part of a theory put forth by Alfred Marshall who identified similar but different factors that contribute to the concentration of industries. Marshall’s theories will be discussed in the theoretical review.

**Research Overview**

With the problem formulated into a research question and having presented the case in point we can proceed to an overview of this thesis. Figure 1 illustrates the structure of the thesis and how its presentation is organized. First a theoretical overview must be assembled looking at the most important theories in the field. These include the work of Marshall, Porter and Krugman who have created a foundation of cluster theories and supplementary research by other scholars. The most important theory is surely Porter’s Diamond which will be explained in relative detail as this investigation is based on the model.

The methodology chapter is divided into two sections. First, the research approach explains treatment of data and second, the research design which handles the actual data gathering. The methodology is based on the premise that the theoretical overview has created. Hypothesis will be created to guide the research.

The hypotheses helped identify important data both primary and secondary. First a literature search was performed on important databases and the Internet to get a clearer idea about the hypotheses as well as to answer or raise questions. Subsequently specialists were interviewed to gain information and perspective on results from the secondary analysis.

Analysis of data was done in accordance with the provided theories and methodology. In the analysis the hypotheses needed to be addressed as they are the bases for answering the overall research question. During analysis additional theories were identified that could further help explain the problem where the suggested framework could not do so. The Canadian National Research Council cluster framework helped to get a holistic view of the problem and subsequently findings were presented where the
research question is formally answered. Finally concluding remarks give an overview of the research along with limitations and future research directions.

Figure 1- Research Overview
Theoretical Review

The theoretical review is meant to explain theories that will be used to analyse the problem and answer the research question. The chapter is split into three broad sub-chapters where a separate theoretical field is considered. First section will look at cluster theories as the research is built on the Diamond model which understandably receives great attention. Other important theories and frameworks will be introduced along with a criticism on Porter. Secondly regional studies will be discussed, with a special attention on Regional Innovation Systems and Identity. These will be used to analyse the region both from an internal and external perspective. Last are other studies for example agency theory will introduced which will complement the previous and assist analysis.

Cluster theories

The first mentions of what we today call clusters were made by Alfred Marshall with his book Principles of Economics first published in 1890. While some scholars have contributed to theories on industrial agglomeration the topic was relatively silent for the next century. Two of the large contributions were made with merely a year between them as Michael Porter (1990) and Paul Krugman (1991) revived the discussion with their respective books which saw the phenomenon from very different viewpoints (Gordon & McCann, 2005). The latter received the Nobel Prize in economics in 2008 for his “analysis of trade patterns and location of economic activity” (Nobelprize.org, 2012). While there was surely theoretical discussion in the century between Marshall and Porter, the biggest contributions have been made in the last two decades built on the work of previously mentioned scholars.

Alfred Marshall

Localization of industries in Marshall’s view (1920) had prepared the soil both for developments in division of labour and business management. Furthermore it was noticed that the simplest villages had set up local industries based on ‘accidents’ which carries a branch of production. These aggregations of skilled workers; “who are gathered within the narrow boundaries of a manufacturing town or a thickly peopled industrial district” (Marshall, 1920). Furthermore Marshall concludes:

*The mysteries of the trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously. Good work is rightly*
With a large ‘aggregate’ production economies of scale and scope can be reached even though each firm is small a network of companies will make for a strong industry. Marshall concentrated much on small businesses while those after him have seen size of less importance though a critical mass needs to be achieved. With the aggregation a pool of talent is created which builds foundations for future development. This talent is not just a source of labour but skilled individuals within industry and tasks. Furthermore social networks are constructed and players can change relationships at will. Marshall on the other hand believed that these forces would diminish with technology though Krugman (Krugman, 1991) on the contrary believed it made these factors stronger. (Marshall, 1920)

Industries could possibly become quite similar without gaining advantages for employees as well as employers the solution to this would be to get industries of supplementary character.

To sum up there are four Marshallian factors that influence the aggregation of industries and companies (Press, 2006):

- Information Spill-overs
- Common Production Factors
- Pooled Labour Markets
- Economies of Scale

The first three contribute greatly to why businesses agglomerate (Krugman, 2009; Press, 2006).

**Michael Porter**

The Harvard professor Michael Porter has been one of the most influential business thinkers in the past few decades (Allen, 2011). He is the author of two of business’ most
influential theoretical and practical models, the *five-forces* and *value chain*. Porter is said to have redefined competition by introducing economic concepts into strategy, first by simplifying the notion competitive advantage and then create a new framework (Economist, 2008).

Porter turned his attention to nations and how they compete in his 1990 book *The Competitive Advantage of Nations*\(^2\). He asked himself why social groups, economic institutions, and nation’s prosper (Porter, 1998). This is basically the same question as Adam Smith tried to answer in his book *Wealth of Nations* in the 18\(^{th}\) century. After analysing ten important trading nations, the Diamond was constructed with four factors influencing the competitiveness of the nation as can be seen in figure 2 (Porter, 1998).

**The Diamond**

The four factors create the competitive context where the company is located. Together they create a picture of availability of resources and skills along with the value and use of information. Furthermore the goals of employers and employees as well as the pressure on firms to innovate and invest can be explained using the model. The factors are:

- **Factor Conditions** – The availability of skilled labour, infrastructure or other factors of production within a nation (or location).
- **Demand Conditions** – Whether there is a demand for the products/services in the market, how it is configured and the quality of the customers.
- **Related and Supporting Industries** – Whether there are world class suppliers available in the nation or other similar and strong industries in the nation.
- **Firm strategy, structure and rivalry** – How companies are formed, organized and managed along with the rivalry between them. (Porter, 1998 p. 71)

Furthermore change events and government can influence all of the four factors. These events are outside the power of the industries environment for example new technology can make the whole industry obsolete or market conditions can change for political reasons. Increased oil prices caused by wars and political decisions in the Middle East have for example put pressure on the global car industry to make

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\(^2\) This research uses a second version from 1998 which is identical to the original in 1990 to the original but with a new introduction by author.
more efficient vehicles. Also the invention of computers must have been a blow for the typewriter industry and in general inventions can alter the environment considerably though the strength of the Diamond can determine whether an invention is turned into a competitive industry or not. (Porter, 1998)

Figure 2 - Porter’s Diamond - source: Porter (1998b)

Government on the other hand can influence with policy, such as in education reforms, changing standards, or stimulate home demand to create an advantage for the industry as the state has big buying power. As an example the goal of the Danish government to increase the portion of sustainable power source must influence clean-tech industries positively while industries based on gas will be affected negatively. It is therefore important to acknowledge that changes can be positive or negative and sometimes both at the same time. The role of government can be partial and policy is considered to be unsuccessful if it is the only source of competitive advantage (Porter, 1998).

The forces work together and influence each other. For the purpose of this research each condition will be explained in detail and what influences it.

**Factor Conditions**

Porter divides the factors into five broad categories and the competitive advantage from factors depend on how efficiently and effectively they can be deployed. Existence of factors isn’t of the greatest importance but how and where they are used (Porter, 1998). These are:
- **Human resources** which are the size, quality and cost of the labour pool.
- **Physical resources** refers to the quantity, quality, accessibility and cost of nation’s land, water and other resources. Furthermore climate, location and even time zone can be considered factors.
- **Knowledge resources** is the quantity of scientific, technical and market knowledge which reside in universities and institutions.
- **Capital Resources** refers to cost of capital available to finance institutes including availability of different financial instruments.
- **Infrastructure** is the nature and quality of infrastructure along with user cost. This may be e.g. transportation, payment and health care system. Furthermore housing stock and cultural institutions that affect quality of life and the attractiveness of the nation. (Porter, 1998 p. 74-75)

Nations are believed to succeed in industries where they can create and more importantly upgrade their factors, preferably through private sector as governments tend to be slow in identify the new fields and specialized fields of particular industries (Porter, 1998).

**Home Demand Composition**

The home demand can give companies advantage if it can give a clearer or earlier picture of needs than firms in other nations receive. The three characteristics important to achieve national competitive advantage are:

- **Segment Structure of Demand** – Firms can gain advantage in global segments that are relatively more important at home than elsewhere. The size of the home market is not of highest importance as scale can be reached through global operations.
- **Sophisticated and Demanding Buyers** – With better customers a superior product can be created that should be competing with poorer products from larger markets. The companies will need to meet higher standards of quality along with distribution and service. Even local disadvantages can encourage companies to come up with solutions that are useful when competing on other markets. An example of this is lack of space encouraged Japanese to come up with solutions such as just-in-time.
• Anticipatory Buyer Needs – The domestic customers can indicate trends that later become widespread. This goes hand in hand with the sophistication of demand as the most sophisticated customers tend to be early adopters as well. On the other hand home customers can lead companies in the wrong direction. (Porter, 1998)

Size of market seems to play a complex role as bigger markets enjoy bigger scale effect while smaller have more incentive to venture abroad. The home market plays especially important role where there is a need for significant initial investment, whether economies of scale are possible and uncertainty in the global environment. On the other hand companies may be slow to go abroad if they see no need, which can also be determined by rivalry on home market (Porter, 1998). In a survey by Rugman and Verbeke among 365 Fortune 500 companies 320 were considered home region oriented with a weighted average of 80.3% of sales happening at home (2004).

Increased number of buyers is seen as an advantage as it increases innovation in contrast to decreased market dynamics with fewer buyers. With a fast growing home demand the pace of technological adoption increases while the risk is perceived to be lower for example when approving large initial investments. (Porter, 1998)

With the growth rate markets become saturated relatively early and with effects both home and abroad. Saturated markets demand lower prices and further product development to get customers to buy improved versions of products they already have. In the meantime the lack of possibilities at home will encourage firms to seek further growth abroad. The success of such ventures will be judged upon their reception in the new market. (Porter, 1998)

**Related and Supporting Industries**

Presence of a world class supplier increases the Diamonds quality, inputs whether it be products or services can in many cases be used across sectors for example superior software. With a good local supplier the coordination of the value chain becomes easier than if it was abroad. Together the industries can innovate and upgrade products and processes more easily with information flowing more freely than if it were done over distance. Having related competitive industries can create capabilities that can be used within other sectors for example personal networks. Related industries can lead to birth of new competitive industries that can share or complement the existing industry
(Porter, 1998). The sharing creates an environment such as Marshall described “as if something is in the air” (1920).

Rugman, Li and Hoon Oh (2009) have in their extensive research determined that supply chains even for global companies tend to be local in procurement, research and development (R&D) activities as well as infrastructure and operations.

**Firm Strategy, Structure, and Rivalry**

The last force looks at the firms and competition. The structure of companies is in many cases influenced by national culture, attitude and legal environment. The styles and structure developed at home can be received favourably or poorly abroad (Porter, 1998)

Company goals are to a large extent determined by attitudes of owners, management and creditors. The time horizon and commitment of investors, owners and even debt holders can differ greatly between countries and culture. While strong commitment is considered positive owners shouldn’t lock resources in hopeless situations and either spend them better or reconfigure the industry a company is in. Individuals on the other hand view their work, wealth, superiors, personal development and risk differently which determines their goals and eventually has an effect on the company. In some instances companies become *national priorities* which can have effects such as increased attraction of talent and stimulate competitive advantage where they are admired and depended upon. (Porter, 1998)

Among the strongest findings of Porter and his colleagues is the connection between domestic rivalry on one hand and creation and persistence of competitive advantage in an industry on the other. While it can be argued that a large number of competitors create a duplication of efforts and lack of scale effects, Porter found few evidences of globally competitive companies from uncompetitive home markets. In those cases government has played a strong role in the development. The domestic rivalry encourages companies to innovate and improve, it is furthermore not seen as negative that the competition becomes personal and that employees compete also for bragging rights. Cross-border competition on the other hand tends to be more analytical. (Porter, 1998)

The local competition therefore makes the companies more capable to compete abroad and in a sense upgrades the industry. The growth is also more likely to happen globally if competition is fierce at home. Having capable companies competing creates a fertile
soil that reaps competitive advantage that is hard to copy. With completely open home market and global strategies could possibly substitute domestic rivalry in smaller nations. (Porter, 1998)

Competitive industries require new business formation as the innovation and different focus is a form of upgrading it. New businesses are generally started from two directions; first is new venture of different sorts for example spin-offs from companies, suppliers or customers while the second is companies based on ideas that come about from academia. These different reasons for new venture formation differ between countries. Furthermore access to capital, and different types of capital, varies greatly between countries along with nature of buyer supplier relationship. (Porter, 1998)

**Summary**

The model described in the pages above has been hugely influential in setting agendas for governments of different levels (Buendia, 2005). It is still important to note that the determinants of advantage are highly complicated and many factors influence it and the four forces furthermore interact with each other. The system is therefore more important than its individual components. In *The Competitive Advantage of Nations* the interplay of factors is further explained which will not be done here.

**Criticism on Porter**

As mentioned Michael Porter has been one of the leading business thinkers for the past few decades and with such a position comes critique. Porter has been criticized for producing forces and factors and passing them of as explanations, he also produces generic strategies that are claimed to work universally (Economist, 1994). Whether Diamonds can stand alone is also debatable and some scholars have pointed out the need for multiple Diamonds supporting each other instead of a single Diamond model (Öz, 2002).

Porter’s factors have been criticized as the forces can be both too broad while still overlapping, Grant questions whether the categories could as well be three or five (1991). Further Grant criticises Porter for analysis having been “…achieved at the expense of precision and determinacy. Concepts are often ill defined, theoretical relationships poorly specified, and empirical data chosen selectively and interpreted subjectively.” (Grant, 1991, p. 535). While other criticisms have been raised the above mention the most important, Öz provides a great overview of critique (2002).
Methodology

Looking at other methodologies for evaluating clusters various techniques have surfaced. Buendia (2005) criticises early models for being quite simple and presents a model with 18 factors influencing each other. Porter’s framework is surely simple with only four forces though each may be more complicated. Different researchers have looked at the clusters through econometric methods, I/O and network analysis, the final products being case studies, cost-related analysis and benchmarking (Schmeideberg, 2010).

Canada’s National Research Council (NRC) has designed an approach to value the cluster strengths and weaknesses to support policy and to measure the progress of a cluster over time (Arthurs, et al., 2009). The framework intends to (Arthurs, et al., 2009; p.267-268):

- Create a world class research and technology base for cluster development
- Support leadership, champions and knowledge based strategies
- Work with stakeholders leverage funding and investment
- Stimulate new opportunities.

![Figure 3 - The NCR model - Source: Arthurs, et al. (2009)](image-url)
The framework seen in figure 3 consists of two parts; current conditions and current performance. The former investigates many of the factors from Porter’s Diamond while the latter identifies cause and effect relationships over time. Each of the six categories is provided with indicators that are weighted together using values from one to five and therefore the maximum value being five from each category and 30 from the cluster. The framework and the weight of different factors can be seen in table 1. (Arthurs, et al., 2009)

Table 1: NCR Model- weight of constructs and sub-constructs

<table>
<thead>
<tr>
<th>Factors</th>
<th>Human Resources 0,50</th>
<th>Transportation 0,20</th>
<th>Business Climate 0,30</th>
<th>Innovation Support 0,25</th>
<th>Community Support 0,25</th>
<th>Suppliers 0,50</th>
<th>Local Activity 0,20</th>
<th>Film Capabilities 0,80</th>
<th>Critical Mass 0,50</th>
<th>Responsibility 0,15</th>
<th>Reach 0,35</th>
<th>Innovation 0,35</th>
<th>Growth 0,65</th>
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The framework was not utilized to structure the research but identified after data gathering to give a holistic view on the different forces playing in regional development. The framework will be further explained in analysis.

**Paul Krugman**

Geography and Trade (1991) looks at the clusters from another point of view namely economics. The book is originally a lecture series conducted by Krugman at the Catholic University of Leuven where he goes into some ideas of his about agglomeration of industries without the constraints of economic journals.

Krugman had in 1979 published a theory on international trade in contradiction to Ricardo’s *Comparative Advantage* (1911) and explains why countries trade similar or same goods between themselves. The theory became known as “the new trade theory” to some dismay of the author (Krugman, 2009). By using the traditional models resources are immobile and trade without cost this is of course problematic. Therefore models are built as add-on to the previous model and so improve them albeit not enough (Krugman, 1991). Krugman blames the limited development between the books of Marshall and Porter on economics having put too strong emphasis on these models.
Krugman noticed while looking at geographic economic activity that it was greatly concentrated and furthermore specialized within location. With that a model was set up where there are two professions that produce at two locations and transport products between the markets. If the transportation cost is low, it will be more economical to set up production, and its fixed cost, in one location and transport to the other. It is therefore no coincidence that the manufacturing belt of US\(^3\) is established when transportation costs decreased substantially. The sources of these localizations are in many cases due to historic accidents and Krugman uses the theories of Marshall to explain why a certain location becomes the centre of activity for a given industry. (Krugman, 1991)

**Unit of Analysis**

While Michael Porter uses his tool to analyse nations and its industries clusters have since been connected to a larger extent to smaller regions, usually cities or geographic units of similar size. In his book Porter has some reservations about a nation being the correct unit of analysis. “*The reasons why a particular city or region is successful in a particular industry are captured by the same considerations embodied in the ‘diamond’ [...] The theory can readily be extended to explain why some cities or regions are more successful than others.*” (Porter, p.157-158 1998). Since the book Porter appears to have changed is mind as can be seen in the definition for clusters that is used for the purpose of this research. There Porter says “*Clusters are geographic concentrations [...]*” (1998b, p. 71).

On the other hand Paul Krugman had little doubts that city or region should be the unit of analysis as the factors mentioned by Alfred Marshall (labour market pooling, supply of intermediate good and knowledge spill-overs) work best if they are of relatively great proximity. “*... an area small enough to make it possible for people to change jobs without changing houses, for hard-to-transport goods and services to be delivered, and for regular personal contact to take place.*” (Krugman, 1991, p.71). Distant cities within same borders will therefore not generate anymore cluster benefits than cities between borders.

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\(^3\) Manufacturing belt : Area raning from Chicago, through Michigan and to the east coast of United States of America.
While research has been done using nations as a unit of analysis (Sjávarklasinn, 2011) it is more common to investigate regional clusters as a part of national policy and OECD has for example published guidelines and case studies from 14 of its member nations (OECD, 2007). Porter has himself mapped the economic regions of United States (Porter, The Economic Performance of Regions, 2003).

In publications by the Oresund-bridge¹ a definition of Oresund the region is quite large with Skane on the Sweden side and Zealand and Lolland-Falster on the Danish side (Öresundsbro Konsortiet, 2011). While places such as northern part of Scandia and Falster to the south add little to the totality they are still included as much of the statistic includes them and not including them in this research would risk comparing apples and oranges. When Oresund numbers are mentioned it refers to the entire region.

The clusters composition can differ in the ways of their relations to each other and whether there is cluster domination within a region. This will be discussed in a subchapter about regional identity.

Figure 4 - Region Oresund - Source: Oresundbron (2012)

¹ The Öresund bridge is run by Oresundsbron which gathers data on developments in the region. The company will be introduced in the secondary data.
Regional studies

The theories presented in this subchapter will explain the unit of analysis both from an internal and external perspective. First Regional Innovation Systems will help determine what needs to be considered when analysing a region. The Regional Identity categorizes the region and gives some indications for the future. Last the public policy will explain how policy affects clusters and its firms.

Regional Innovation Systems:

The concept of Regional Innovation Systems (RIS) is defined as a specified geographic unit „in which firms and other organisations are systematically engaged in interactive learning through an institutional milieucharacterised by embeddedness“ (Coenen, Moodysson, Asheim, & Jonsson, 2003 p.7). The RIS derives from two bodies of theories; first the systems of innovation including both internal and external views, evolutionary theories and social aspects. Second is the regional science which looks at both the social and institutional environment of innovation. The systems are developed to focus upgrading of capabilities of local firms and their environment (Doloreux & Parto, 2012). Regional innovation systems emphasize geographical proximity, trust, norms, routines, conventions and learning (Coenen, et al., 2003, p. 1). Clusters and regional innovation systems are closely related and can co-exist within a region with the former explaining industries and the latter the more generic sector orientations (Asheim & Coenen, 2005).

According to Cooke et al. (1997) technological systems can be regional, international or even global and have different stakeholder depending on which level is looked at. The regional innovation system can be viewed from two angles (Cooke, et al, 1997): The former looks at key organizational elements and the linkages between them, ranging formal such as flow of information, knowledge, funds and authority to more informal such as networks, clubs and partnerships. The latter observes if system creation is policy driven or naturally evolves into one.

The research approach of Cooke (2002) when analysing the Massachusetts region is through five different but linked concepts:

- Region
  - A unit somewhere between national and federal, that might have cultural homogeneity and has powers to influence economic development
• Innovation
  o Commercialization of new knowledge
• Network
  o A set of linkages among players influences members to pursue common interests who evolve with changed members or disappear.
• Learning
  o New levels and kinds of knowledge, skills and capabilities, tacit or explicit, for the use of firms or otherwise disregarded.
• Interaction
  o Players communicate formally or informally with a focus on innovation to learn, critique or pursue projects together. (Cooke, 2001 p. 954-5)

The framework will be used to analyse the region.

**Regional Industrial Identity:**

The Oresund region has had great results in some particular industries and therefore has a certain identity both looking at it from internal and external points of view. Romanelli and Khessina looked at the concept of regional industrial identity as a social code, and concluded that it: "(1) arises from the shared understandings of residents and external audiences about the suitability of a region for particular kinds of business activity and (2) influences decisions about where to locate investment." (Romanelli & Khessina, 2005, p. 344).

Areas that confirm the identity that is expected are more likely to receive resources while those who don’t are punished (Zuckerman, 1999). A region therefore is more likely to get for example foreign direct investment if the expectations from investors are in line with reality. The regional identity are much in line with what kind of industries the people are working in, the places therefore make themselves up (Molotch, Freudenburg, & Paulsen, 2000). The identity of a region should therefore be made up primarily by is the activity in the region and an investment in that sector more likely than in others that aren’t associated with the regions identity. The identity therefore gives some indication of what will happen in the region in the future (Romanelli & Khessina, 2005).
The configuration of clusters is considered by two parameters; first if a certain industry is dominant within the region and second how interrelated the clusters are, figure 5. The interrelated cluster is therefore more likely to have a homogeneous and stronger identity and therefore its ability is greater to attract resources. Stronger industry clusters are significant contributors to the local economy and likely to attract attention. (Romanelli & Khessina, 2005)

![Cluster configuration diagram](image)

Figure 5 - Cluster configuration - Source: Romanelli & Khessina (2005)

A cluster that is unrelated to the dominant cluster is therefore less likely to attract investment than if it were related.

The theory will be used to analyse the region, its identity and how related it is. The analysis on Regional Innovation System will look at interrelatedness while this look at the region as a whole.

**Public Policy**

As previously mentioned policy makers have taken an interest in cluster formation (Buendia, 2005, p. 94) the objective of cluster policy is to benefit the firms within the cluster and not just the formation of a cluster. The policy is mostly indirect and as Porter suggests not directed at single projects or firms (1998). The policies are only part of the environment a company or cluster as evolvement is often “[…] affected by a large number of (often unobservable) factors which are in many cases beyond the reach of the
cluster policy” (Schmeideberg, 2010). Furthermore the other policies can have an effect on development and behaviour of firms (Sternberg, 2003) and the intended policy other effects than intended both on the companies inside the sector and outside. Figure 6 shows this relationship.

![Figure 6 - Factors affecting economic policy – Source: Schmeideberg (2010)](image)

Figure 6 shows how external factors along with other policies affect the cluster development. The policy is therefore just one of the forces that determines the business environment within a region.

**Other Theories**

This subchapter will look at the triple helix model which looks at the interplay of academia state and industry. In addition agency theory and supplementing theories will be explained as it can help identify problems that can come up in a relationship between different levels of policy and decision making.

**Triple Helix Model**

The triple helix model serves to explain research systems in a social context (Etzkowitz & Leydesdorff, 2000). The three helixes are government, university and industry which influence each other while being counter influenced by the others at the same time, figure 7. These interlocking dynamisms are; institutional transformation, evolutionary mechanism and new position of the university. With the system the innovative role of universities can be defined in a knowledge based economy (Etzkowitz & Leydersdorff, 2000)
The government should encourage knowledge development with limited control to create an innovative environment. Initiatives can come from different sources such as university spinoffs, trilateral initiations and strategic alliances among different players in the helix. (Etzkowitz & Leydersdorff, 2000)

![Tri-lateral networks and hybrid organizations](image)

Figure 7 - The Triple Helix - Source: Etzkowitz & Leydesdorff (200)

Effective policies should reflect the problem under consideration. The challenges in the local environment can then serve the purpose of identifying and hopefully removing barriers. The constantly changing environment will need to create disturbances the system operates to take advantage of them. The more global industries are the less affected they will be by local policies because of their context. (Leydersdorff, 2000)

According to Asheim and Coenen the helix model is a narrow definition of an innovation system with its R&D institutions of different players in a top-down model (2005). A different and more interactive view is presented by Lundvall where; “all parts and aspects of the economic structure and the institutional set-up affecting learning as well as searching and exploring” (Asheim & Coenen, 2005, p. 1179)

The theory will be used to analyse the relationship between academia, industry and state both within and across the region.
Agency Theory and Regional Integration:
As the players of the Oresund cooperation are numerous and problems can be viewed from different levels agency theory will be introduced and during analysis the relationship will be analysed. Agency relationship is one where the principal(s) gets an agent to perform a job for them delegating decision making authority along the way. If both try to maximize their benefit it can be assumed that their interests will not be aligned. The principal can limit the problem by aligning interests using incentives or experience cost of monitoring the work (Jensen & Meckling, 1976; p. 308). Double agent problem comes up when there are two owners of the problem and their interests or rewards misalign, figure 8 (Tate et al.; p. 808).

Figure 8 - Double Principle problem – Source: Author

Stakeholder theory offers some help in clarifying the relationship between players in the region. Few concepts need to be defined (Mitchell, Agle, & Wood, 1997), first power which can be understood as the dependence of the other party. The dependence of party A on B is therefore B’s power. Legitimacy refers to the generalized assumptions of that actions are proper and desirable. Lastly urgency refers to the degree of urgency which a problem can be acted upon. Stakeholders may hold one, two or all of the attributes as can be seen in figure 9 and the strongest position is surely with all:
Stanley Hoffmann wrote about regional integration in Europe though his analysis had a different scope both in time as it was written in 1966 and topic which was politics. His theories can still be applied to some extent to the problem at hand as he analysed *the Fate of the Nation State*. The regional integration was (1) not considered an administered process if external constraints had any influence, (2) individual states were considered unique and powerful players and he (3) criticised functionalists for failing to distinguish between low and high politics (Koos, 2011). As Hoffman’s work was written for international politics applying the theory on the problem at hand requires that the region is considered in the cooperation with its nation states (and not the international community to seek independence). States in Hoffman’s work therefore become regions in the application and the international system becomes the national. Moravcsik also writes about international politics and his theories can be applied to regional politics. He suggests looking at the problem from three perspectives that is (Moravcsik, 1997 p. 516-, Koos, 2011):

- **Agency** – the players promote differentiated interests under constraints imposed by material scarcity conflicting values and variations in social influence.
- **Representation** – preferences represent subset of the society.
- **Interdependence** – Configuration of the interdependent players preferences determines the states behaviour.

Agency theory and other theories presented in this chapter will allow the region to be analysed as cross border unit. Cooke et al. talk about three policy levels; national, regional and local (1997) as the unit of analysis is a region the last level will be of less importance.
Methodology

Having touched on the underlying theories a relevant methodology chapter can be constructed. As mentioned the Diamond framework will be used to analyse the unit of analysis. This chapter serves two-fold purpose, first to determine how data will be handled and second the research design. Therefore the former will discuss different research approaches and methods of handling the data gathered. This provides the following research with guidelines that were to be used if the methodology needed changing once the process has started. The latter is a description of steps to take in order to answer the research question. Hypotheses were put forward which would then guide the data gathering using primary or secondary methods.

Research Approach

The research approach gives a framework to how data will be analysed in the research. First the research philosophy, which will be used for the purpose of this research will be introduced. Then what type of study is conducted along with the data collecting method and lastly three short chapters on ethics, validity and reliability that were kept in mind during the research. The purpose of this chapter is to sharpen the focus and keep the research method constant.

Research Philosophy

Positivism is based on three basic principles, first that the social world exists externally and is viewed objectively, second that the research is value free and last that the researcher is independent and objective. The information gathered should therefore not be influenced and different researchers using the same methodology should come to the same conclusion. The social world can be reduced to simple elements and made into fundamental laws, therefore researchers applying the principles of the philosophy often single out one explanation. (Blumberg, 2011)

Interpretivism on the other hand takes another view using its own three principles, first that the social world is constructed and is given meaning subjectively by people, second that the researcher is part of what is observed and last that the research is driven by interests. Interpretivists argue that simple laws don’t explain the world but complex interplay of social elements, which has different meaning to different individuals. Therefore knowledge is developed using observation and interpretation and social phenomena understood looking at totality. (Blumberg, 2011)
Realism shares some of the principles of both as they use the approach dominant in natural sciences while some interpretation is necessary for understanding. (Blumberg, 2011)

Upon advice it was decided to choose either positivism or interpretivism since not choosing between the two could be problematic. As the diamond framework is quite a complex model with interplay of factors that can hardly be explained singularly, this research will take the view of interpretivism.

**Type of Study**

Exploratory studies are conducted when researchers lack information or knowledge about the research subject. At times the method can save time and money as some conclusions can be made from the findings and possibly an expensive full but flawed research averted. Four exploratory techniques are identified by Blumberg (2011); secondary data analysis, experience surveys, focus group and two stage designs where the first stage defines the question and the design and the second conducts the actual research. (Blumberg, 2011)

Descriptive studies have clearly defined hypothesis and research question. Typically these researches serve to; describe phenomena or characteristics of population, estimate proportion of population that have certain characteristics, discover associations among different variables. (Blumberg, 2011)

Causal studies try to explain a causal relationship between variables. The difference between causal association and correlation is between variables can often difficult to identify. (Blumberg, 2011)

The study will use a two-fold structure, which will first explore secondary data to find data and get a better idea of the topic and then get information from specialists. The first part is therefore exploratory and the second descriptive.

**Data Collecting Method**

Primary data describes information that is gathered especially to answer the research question while secondary data is data that is readily available but possibly collected for other purposes. The main advantage of the latter is that it is available for often low, or without, cost and may serve the information need just as well. Primary data should be
gathered to get information that isn’t available or the quality not sufficient e.g. if variables such as population or time differs greatly. (Blumberg, 2011)

For the purpose of this research secondary data will be gathered primarily from databases and reports available. Primary data will then complement and supplement getting information and perspectives from experts in different fields.

Gathering data is furthermore divided into two categories; quantitative and qualitative. The former measures the quantity of what is being researched while the latter refers to the meaning, definition, analogy, model or metaphor categorizing of the subject. Often the choice of methods derives from epistemological issues, for example if the goal is to measure reality or to understand and explain it. To determine which approach to use Blumberg (2011) proposes four questions:

- What is the research problem?
- What type of study is being conducted?
- What is the objective?
- What kind of information is preferred and what does the researcher have access to?

The first two questions have already been answered. The objective of is to answer hypotheses and subsequently the research question, the objective of the secondary data gathering is to find numerical information as well as qualitative reports on information that has been identified in the hypothesis. It is assumed that further interpretation is necessary and that interviewing specialists will result in deeper understanding of the problem. Furthermore it is expected that the interviewees can provide new information or directions.

**Ethics**

In the case of problems that may come up during the research any changes to the methodology need to be considered ethically. Furthermore the information gathered needs to be handled with care as well as all information sharing considered from the perspective of the participants’ well-being.

**Validity and Reliability**

A research is considered valid when it measures the intended variables while reliability refers to the quality of measures, its accuracy, precision and consistency (Blumberg et
al., 2011). It is therefore important that data is both valid and reliable and if not that better information is gathered.

**Research Design**

The research design acts as a blue print for the gathering of data, its measurement and subsequent analysis (Blumberg et al., 2011). The prior subchapter explained philosophy of the research and how data should be handled and considered. On the other hand this section will be more case specific, providing rather detailed steps on what information is important and needs to be gathered to answer the research question. To fragment the research question hypotheses were constructed. Initially the four pillars of the diamond framework were used as umbrella categories for the hypothesis. Then World Economic Forum’s competitiveness report was analysed especially in light with its methodology (2010). The report provides information about what data needs gathering and is important. From that thirteen different pieces of information were considered important to answer the research question

Eventually a list of 12 hypotheses emerged under the previously mentioned four categories. The secondary data was first gathered and then interviews conducted

**Hypotheses**

A hypothesis can be defined as a statement in which variables are assigned to cases, furthermore the hypotheses are descriptive in nature rather than relational which describe a relationship between two variables (Blumberg et al., 2011). All hypotheses are assuming change with increased integration.

As the thesis does not concentrate on a specific industry but rather general business environment within the region some forces within the Diamond are more important than others. For that reason and the fact that some pieces of information are judged to be of higher importance than others, the hypotheses have been split into two categories; A and B.

The hypotheses were based on the observations of the researcher made after surveying the subject of this thesis before delving into a more detailed investigation. These observations are in the form of statements that are either positive or negative. A negative hypothesis that is rejected therefore shows a positive relationship with integration and vice versa.
As the region has no singular representative, a number of specialists could give their valuable opinions based on either experience or research. Therefore semi structured interviews were the main source for primary data gathering method. Each hypothesis was assigned an ideal representative though these specialists are not included in the following explanations.

Factor Conditions:
Five different hypotheses are under this umbrella category; Human Resources, Physical Resources, Knowledge Resources, Capital Resources and Infrastructure.

Hypothesis 1:

The human resource pool has integrated with an effect on both quality and quantity.

To support the hypothesis information about commuting and any sort of common use of the resource pool needed to be gathered. Furthermore the composition was needed to know where these commuters were in the value chain. Quality is difficult to determine but for the purpose of this research it was considered to be any sort of supplementary effects, that is to say that capabilities that did not exist on one side could be found on the other.

The hypothesis was determined to be in category A.

Hypothesis 2:

Physical resources remain unaffected by the increased integration.

In Competitive Advantage of Nations physical resources is defined as “the abundance, quality, accessibility and cost of the nation’s land, water, mineral or timber deposits, hydroelectric power sources, fishing grounds, and other physical traits.” Furthermore climate, location in relevance to others and time-zone can be seen as physical resources (Porter, 1998, p. 74-75). Looking at the theories of Cooke it can be seen that companies have increased their use of cross-national value chains (2002) local sourcing is therefore of less importance especially as the countries in question are well accustomed to sourcing from abroad and have little barriers to import.

The hypothesis was determined to be in category B.

Hypothesis 3:
Knowledge resources have strengthened with collaboration between institutions and researchers.

To answer this hypothesis the focus was on academia and cooperation with industry. Some collaboration was assumed to exist but the depth and the success needed to be determined. First initiatives needed be identified and evaluated with the help of a specialist.

The hypothesis was determined to be in category A.

Hypothesis 4:

Cost of Capital has not improved due to the increased integration.

The hypothesis will look at whether financial institutions have more capital available as a cause of the integration. This is deemed to be unlikely and the importance of this hypothesis therefore considered low.

The hypothesis was determined to be in category B.

Hypothesis 5:

Infrastructure has improved in regards to transportation and housing stock but not payment.

This hypothesis analysed whether infrastructure had improved after the construction of the Oresund-bridge and therefore the bridge was not considered as an “infrastructural-event” within the scope of the research question. The use of transportation by people within the region was looked at as well if the transportation network had improved to and from it. The usage of airports, ports and other factors was considered both with regards to capacity and usage.

In regards to housing it is interesting to note if people have moved within the region to utilize differences in house prices or whether changes can be directly associated with the increased integration. The second part of the hypothesis (about payment) was determined to be of less importance.

The hypothesis was determined to be in both category A and B.
**Home Demand:**

Under the category four different hypotheses were constructed; segment and structure of demand, sophistication and demanding buyers, anticipatory buyer needs and last size of the market.

As a whole this category was believed not to have been greatly influenced by the increased integration of the region. Both countries (Sweden and Denmark) are known exporters and it was assumed that companies generally put less importance on local market than many other countries.

Hypothesis 6:

*Segments have gained options with the increased integration.*

It was determined that with increased market size options will increase for all players in the market though especially at a business to consumer market. Niche segments were believed to have gained most from this as they become significant enough to exploit.

The hypothesis was determined to be in category B.

Hypothesis 7:

*Sophistication and demanding of buyers has not increased as a cause of the increased integration.*

It was believed to be unlikely that sophistication of buyers has increased as a cause of increased integration though this may have happened due to other causes such as increased availability due to globalization and/or Internet.

The hypothesis was determined to be in category B.

Hypothesis 8:

*Companies increasingly consider the entire region as their home market (geographic scope).*

The last factor looks at the size of the market and whether it has changed. While the region hasn’t gained more companies or consumers as a cause of integration their accessibility was determined to have changed. It was believed that if companies increasingly thought about the region as a single unit rather than separate it would be
due to increased integration. The geographic scope was therefore considered to have changed to relate increasingly with companies on both sides of Oresund.

It is important to note that here the topic is home demand and therefore it is more about downstream activities than upstream activities of the value chain.

The hypothesis was determined to be in category A.

**Related and supporting industries:**
The category has one hypothesis regarding suppliers and the value chain.

Hypothesis 9:

*The value chain of companies is increasingly set up cross borders but within the region.*

As the two countries have different environment with different factor conditions. It is therefore believed that companies will position different factors in the value chain where they can reap location related advantages.

This hypothesis was determined to be in category A.

**Firm Strategy, Structure and Rivalry:**
The category has three hypotheses about national priorities, local competition and new venture creation.

Hypothesis 10:

*The increased integration has not affected national priorities.*

It was believed that national priorities have not changed due to the increased integration. There may have been some effects although they should be both limited and indirect if any. Factual incidences are therefore unlikely to be found and relation considered rather to be based on opinions.

This hypothesis was determined to be in category B.

Hypothesis 11:

*Competition has increased with increased integration.*
As mentioned this hypothesis has relations with a hypothesis six, eight and nine. With increased accessibility the scope of acquiring customers was believed to have increased especially when it comes to sales. With it the competition should increase with pressure on differentiation. Another factor mentioned by Porter is ‘local rivalry’ which is surely important but as it is difficult to measure without increasing the scope of this research substantially that was not done. Therefore the force will not be investigated more than as a portion of this hypothesis.

The hypothesis was determined to be in category A.

Hypothesis 12:

New venture creation has increased with increased integration.

The problematic point in this hypothesis is the causality. Surely no ventures are caused by increased integration but the integration should encourage companies and individuals to work together on new projects. Getting information about these ventures does therefore not come from readily available statistics.

The hypothesis was determined to be in category B

Secondary data

Using the hypotheses the researcher started by looking for data on the Internet. Many institutions have excellent websites that provide information about different activities within the region. The first stop was the Oresund bridge website whose analysts have gathered information about a variety of topics connected to the bridge either directly or indirectly. From that summary institutions and websites were identified, furthermore simple Google searches rendered websites that would then point in new directions. This work also helped identify potential respondents that were subsequently interviewed as discussed in the primary data chapter. These respondents would in some cases suggest further information about a given subject that would be looked into and added to the secondary analysis.
**Interviews**

With the hypotheses and large amount of secondary data a number of generic respondents were identified, some being individuals while others representatives of certain organization. A list of the generic interviewees can be found in appendix 01 to 05. In some cases more information turned the attention to different organizations. On other instances organizations would be contacted that in turn provided the researcher with a qualified respondent. The final list of respondents can be seen below:

- **Sven Junghagen** – professor of marketing at Copenhagen Business School who lives in Malmo and commutes to work via the bridge. He furthermore was understood to have deep knowledge of the business environment in the region.
- **Ulf Andersson** – professor of strategy at Copenhagen Business School, a Swede, with experience of Swedes industries though not specifically Oresund or southern Sweden.
- **Filip Jinnestrand** – after contacting representatives the organization running the Oresund-bridge the author was pointed in the direction of the Oresund Committee (Oresund Konsiertiet) and Filip who works for it.
- **Eskil Martensson** – An interregional coordinator for Region Skane. He works to coordinate work with Denmark and inform politicians of their work.
- **Sara Virkelyst** – a project manager at Oresund University is a network helping universities in the region collaborate.
- **Peter Munkholm Nielsen** – An analyst at Copenhagen Capacity, a promotional agency for inward investment.

From the hypotheses and secondary data analysis an initial questionnaire was constructed, as mentioned the interviews where intended to be semi-structured and therefore the questions were merely intended to guide a. As the interviews progressed the subjects would narrow as some hypothesis required more points of view than others. New questionnaires were therefore built before each session as the new information would supplement and guide the research.

The interviews were initially set up on two subsequent working days, unfortunately that did not work for the respondents and eventually the interviews were conducted over an eight day period, two interviews on the first day, one on the fifth day and three on the eighth day.
The respondents were told the interview would take about half an hour though a request was made to schedule a full hour. Most interviews took close to an hour with an average time of 52 minutes and 58 seconds. Each interview was recoded and transcribed except the one with Sara Virkelyst who provided information on a very narrow part of the problem. The transcribed interviews can be found in appendix 01 to 05 and all interviews are provided on digital form upon request.

**Analysis**

To analyse the interviews few methods were used. First a word cloud was constructed to give to graphically show the most common words used in the interview, for optimal results all common words that are not relevant to the subject are removed along with all words provided by the interviewer. Words not relevant to the subject can be words and phrases commonly used such as “you know” and “definitely”. At the end of the interviews in appendix a list of removed words is provided. The same settings are on all word clouds and all have 30 words. The word cloud was then interpreted to give a general feeling of how the discussion for example if a participant would compare geographical locations they would be bigger than others. A respondent from Copenhagen talked more about Stockholm, who is their biggest competitor, than Malmo and therefore Stockholm was more visible on the cloud. Some biases are to this methodology as the questions will point the discussion in certain directions, furthermore as has been mentioned the questions weren’t the same between interviews and therefore comparison to some extent flawed although it is indicative.

After doing the word cloud analysis the transcribed text would be investigated for certain topics and similar information gathered to make the text coherent. As the analysis is on average around three pages including word cloud and the transcription around three times longer the points are determined to be the most important ones. In some cases the interview does not include responses that are then mentioned in the subsequent analysis.
Biases

While individual biases will be accounted for in the respective interviews some general biases do exist. First five out of six respondents are Swedish and four out of six respondents work in Denmark which should even out the difference to some extent. To see different viewpoints of Copenhagen and Skane representatives were chosen, it was presumed that nationality would correlate with the workplaces. The different views are therefore evenly distributed. For the remaining respondents from Oresund University and Oresund Committee the organizations were contacted and a respondent requested regardless of their nationality. The provided respondents happened to be Swedish and still talk on behalf of a cross border organizations.

Four of the respondents work for an organization promoting Oresund and therefore a certain value was seen in the scholars who do not. Two of the respondents commute to work and a value is seen in having respondents with practical experience from that. Two of the respondents worked in the integration at and around the opening of the bridge.
Secondary data:
Prior to conducting the interviews; information needed to be gathered to create valid and reliable understanding of the subject. This information search was guided by the hypotheses and its final product intended to be a strong questionnaire, which the interviews were to be based upon. Furthermore the information would be the basis of the secondary analysis and provide quantitative data.

The following section will therefore take a look at institutions working in the area. Initiatives will be introduced along with statistical information about the region that some of the institutions collect. Last conclusions will be gathered in a special subchapter to gain an overview.

The region
The region of Oresund has been defined in the theoretical review, however the units on either side are in many ways different and need to be introduced before proceeding. These introductions are not meant to give the full picture of the featured territories but rather a glimpse into the region, its significance and realities.

Copenhagen and Zealand
The Danish side of Oresund consists of several islands most notably Zealand where Copenhagen is the biggest city. The municipality of Denmark’s capital city has merely 700,000 inhabitants though the greater Copenhagen region (d. hovedstaden) is said to be around 1,5 million people and the Danish side of Oresund a total of over 2,5 million inhabitants (Statistics Denmark, 2012). Economically the Danish part of Oresund accounts for 48% of the nations’ GDP with many of the biggest companies such as Novo Nordisk located in the area and most of the governmental institutions (Tendens Öresund, 2012c).

The capital region is challenged by a shortage of skilled workers and capacity for innovation could be improved (OECD, 2009). OECD recommends strategic vision that is based on (1) increased availability of skill, (2) fostering innovation and research, (3) upgrading infrastructure and housing supply and lastly (4) to strengthen governance provisions to implement economic development (2009). Innovation capacity is average

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5 It is worth noting that the report is from 2009 and that Copenhagen Capacity have put some of the criticized featured in the focus.
and links between education and firms could be improved. OECD (2009) recommends further collaboration within the Oresund region to achieve goals of economic growth. Copenhagen is said to have the potential to be one of world’s most environmentally friendly city regions (OECD, 2009).

Copenhagen is in the process of building a metro system and has an established railway network. The renowned cycle infrastructure is used by 55% of Copenhageners to get to work or school. Only Holland is comparable in terms of cycling in Western countries (City of Copenhagen, 2012).

**Malmo and Skane**

Skane is the southernmost province of Sweden with a total population of 1.25 million inhabitants, 300,000 of which live in Malmo the country’s third largest city and 110,000 in Lund (Statistic Sweden, 2012). The province provides 12% of the country’s GDP and the local economy hold a strong position in manufacturing industries while employment in high tech and knowledge intensive industries was only slightly below the national average. The province was named the eighth most innovative region in Europe in *European Regional Innovation Scoreboard* when last published in 2006 (European Commission, 2012). According to Stephan Muchler the CEO of South Sweden Chamber of Commerce the region is currently the “master of Sweden” in terms of economic growth, R&D is said to have doubled and knowledge intensive business services have increased by 45% in recent years (2011). Cluster initiatives have been started both at a provincial level as well in cooperation with Oresund. The most notable is perhaps the *Regional Development Program for Skane 2009-2016* which goals are growth, attractiveness, viability and balance with key points being (European Commission, 2012):

- Making Skane a leading knowledge region.
- Increase participation and reducing exclusion.
- Reduce environmental impact and climate adaptation.
- Increase accessibility.
- Increased integration within Oresund.
- The plan collaborates with various initiatives with more specific vision and goals.
Governance

With Oresund being a cross border region the governance becomes complicated. OECD for example points out that this “experiment” is unique as it is driven from the bottom-up and the local governments which have “developed responsibility (in form of ‘mutual obligations’) but have not developed authority for regional governance” (Garlick, Kresl, & Vaessen, 2006). The following chapter will explain how the regional administration.

Oresund Committee

The committee which was founded in 1993 is an official platform for regional political cooperation within the Oresund region. It serves as an interest organization that acts in matters dealing with for example the national parliaments of Sweden and Denmark as well as the European Union. Furthermore it works to strengthen the regional cross-border cooperation. The members of the committee are politicians who represent the regional and municipal governments (Öresund Committee, 2012).

The committee defines five development areas to be of high importance namely; labour market, climate, culture and events, accessibility and mobility along with knowledge and innovation (Öresund Committee, 2012).

For a further development a functional common labour market is considered a necessity as well as an integrated housing market. Forecasts indicate labour shortages in the future which are believed to cause bottlenecks and competition across the strait. The committee serves to solve this problem by engaging in conversions with players in the region. (Öresunds Committee, 2012e)

The region should be a global leader in sustainable development by coordinating climate work within its borders and pursue opportunities to share best practices. (Öresunds Committee, 2012b)

With over 200,000 people within the Oresund region working in the cultural sectors a special emphasis is put on the subject. Residents should be made aware of the cultural resources available along with boosting cooperation on events. Cultural events range from; shared cultural historical heritage to sport events along with traditional art and media. The goal is to increase diversity and cooperation as well as to create new

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6 The terms municipal level and local level are used interchangeably.
opportunities for example in collaboration with businesses. (Öresunds Committee, 2012c)

The accessibility and mobility of the region should be increased both at individual level and with the help of public transportation to facilitate work and studying as well as to experience what the region has to offer. The three goals aim to facilitate transportation (1) to or from the region, (2) within or (3) through it. (Öresunds Committee, 2012)

The committee aims to increase the importance of knowledge and innovation to strengthen the region’s competitive position. Skills and resources should be used optimally on both sides of the strait to attain the critical mass that is necessary to be internationally competitive. The committee has a working group to coordinate work with stakeholders in climate technology, clean-tech solutions and with innovation-intensive companies. (Öresunds Committee, 2012d)

ÖRUS

The committee has created the Oresund Regional Development Strategy, or ÖRUS to “defend the region from increased international competition with increased cooperation to create growth and build dynamism” (2012). The strategy’s goals are to be reached by the year 2020 and reviewed annually to reflect changes and readjustments (Öresunds Committee, 2012f).

The region should in 2020 be (Öresunds Committee, 2012f)⁷:

- A front-runner in environmentally friendly transport and a laboratory for green technology.
- A centre for clean-tech solutions and sustainable urban development, to host an Oresund Region EXPO in 2022.
- A single, attractive, obstacle-free labour market where people with different educational backgrounds, professional skills and practical experience have unrestricted access to all of the region’s workplaces, regardless of whether they have acquired their proficiency in Sweden, Denmark or elsewhere.
- A model for how to make the best possible use of the resources that workers with a foreign background can bring to the labour market.

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⁷ The bulletpoints are to large extent unchanged from its source
• A region that provides individuals and companies with an overview of opportunities, regulations and frameworks through ØresundDirekt.

• A model region in terms of digital integration through the use of high-quality broadband.

• A region with a diverse cultural offering that meets high criteria in terms of quality.

• A region that invests in cultural activities produced for, with and by children and young people.

• A host for international events and a popular tourist destination.

• A cohesive, competitive educational market that produces the best-trained graduates and attracts students and researchers from other countries.

• A hub of innovation, with entrepreneurs and synergies between educational institutions and trade and industry.

• A region whose residents are able to make use of all that the region offers and to explore its potential.

**Initiatives**

Several initiatives have been brought forward by the local and regional governments along with players in the market. All of these aim to attract investment, companies and talent to the region as well as improve its image and increase growth. In the following sub chapters these initiatives will be introduced, some will require a longer section especially when it comes to focus of the region. First are the inward agencies on both sides of the strait along with science parks then the networking organizations Oresund University and Oresund Science Region and last are few interesting projects that are mentioned in interviews to gain a better perspective. The list is not extensive but should give a good picture of the most important activities.

**Copenhagen Capacity**

The organization assists investors in identifying and exploiting opportunities in the Copenhagen region by providing information, services and assistance. Investors looking for a location that meets requirements for knowledge, industrial specialization, educated

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8 A website that provides inhabitants with information about different aspects of life both business and private www.oresunddirekt.

9 The list is unchanged from its original source on the website of the Oresund committee
workforce amongst others can use the help of the organization. Copenhagen is said to be leading in the following fields:

- Life-Sciences
- Information and Communication Technology (ICT)
- Film & Entertainment
- Clean-Tech

The focus is therefore on these industries and employees are in many cases specialists within these fields. Copenhagen Capacity can therefore help identify partners or assist in setting up operations without compensation. (Copenhagen Capacity, 2012)

Copenhagen Capacity is considered a great starting place for a company hoping to relocate in the area with information ranging from industry specific to taxation to guidance on international schools. A high emphasis is put on getting in touch with the organization, have a meeting and to provide good information to potential investors be it work or daily life.

**Invest in Skane**

The organization is comparable with Copenhagen Capacity but promotes the Swedish side of Oresund. Invest in Skane is intended to promote inward investment along with internationalization of the regional industry. They provide advice and services to companies that are considering relocating within the region. The organization facilitates networking with partners along with help on legal, labour, and tax issues. While the website is not as extensive as the one of Copenhagen Capacity it is possibly more focused. The main advantages put forward are said to be stable economy, well trained work force and broad local markets (Invest in Skane, 2010d). The region boasts of interesting projects such as the European Spallation Source which will be introduced in the below and the four following science parks (Invest in Skane, 2010b):

- Ideon – in Lund
  - As Scandinavia’s first research park it was built to utilize the ideas and knowledge of Lund University. The park concentrates on biotech, IT and high tech. Successful companies such as Sony Ericsson Mobile Communication, Axis, Opsis, Televa and BiolInvent have started at Ideon.
• Medeon – in Malmö
  o The park concentrates on bioscience and medical technology companies with benefits from a large network of companies working within the medical industry.

• MINC (Malmö Incubator) – in Malmö
  o The Concentration is on IT and digital media, nanotechnology along with clean-tech companies. The incubator is intended to support small knowledge intensive companies with their first steps.

• Krinova – in Kristianstad
  o The focus is on creative, knowledge-oriented companies with close cooperation with University of Kristianstad.

Invest in Skane furthermore identifies seven industrial clusters and the focus therefore pointed in that direction with good information provided on each of them (Invest in Skane, 2010):

• Food technology
• Life Sciences
• Packaging
• Information and Communication Technology (ICT)
• Logistic
• Tourism
• Clean-Tech

Oresund University
The network is an initiative to initiate, facilitate and administrate unique cooperative projects between eight universities on both sides of the borders. The collaborating universities have 165,000 students, 10,000 researchers and 6,000 PhD students. The networks goal is to increase visibility and take advantage of the complementary skills, structures and experiences within the region. Furthermore to reduce barriers, increase efficiency and quality, creating opportunities for students and improve the university environment (Oresund University, 2012). The initiative will close in August\textsuperscript{10}.

\textsuperscript{10} Oral source: Sara Virkelyst
**Oresund Science Region**

Was a regional development project with different platforms and projects to reach its aim to promote knowledge based economic growth. Under the umbrella were several projects supported by universities, companies and organization such as (Oresund IT, 2008):

- Medicon Valley
- Oresund IT
- Oresund Environment Academy
- Oresund Food Network
- Oresund Logistic

Apart from Medicon Valley all the programs closed in early 2011. According to Sven Junghagen the original concentrations were to create a propeller, which metaphorically was intended to drive the Oresund economy. The four fields were; bio-medics, IT, Food sciences and clean-tech.

**Medicon Valley**

The brand Medicon Valley is an initiative started in 1997 by; Copenhagen Capacity and Invest in Skane to promote search for R&D partners, new technologies and investment to maximize business opportunities. With around 500 companies, universities and hospitals in the region the cluster is considered one of Europe’s strongest in the field of life sciences. It has experienced great success in the past ten years with a strong infrastructure, tax environment and high quality labour pool (Medicon Valley, 2012).

Coenen et al. (2003) analysed the cluster using regional innovation theories and came to the conclusion that a collective order was more likely to be found in individual countries rather than within the whole region. Functional and particularly relations proximities are considered a necessity to encourage innovative interaction. While functional proximity was reduced by building a bridge that did not build trust overnight (Coenen, et al., 2003). It has to be kept in mind that the research is almost a decade old and a lot has happened since.

Medicon Valley has created a critical mass of biotech companies being a superior player in the European environment. The significance is put into context by looking at the

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11 Oral source Eskil Martensson – see appendix 04
publication rate, which was 50 per cent higher than regions such as Cambridge, Oxford, Edinburg, Stanford and Helsinki in 2004. Both the Swedish and Danish government have set goals for the industry with an effect on, for example, funding and tax environment (Gestrelius & Oerum, 2005).

**European Spallation Source (ESS)**

The project is a cooperation of several European nations (and not the European Union) to build a large multi-scientific research facility for advanced research in a large number of fields for example (European Spallation Source, 2012b):

- Chemistry
- Nano and Energy Technology
- Environmental Engineering
- Foodstuff
- Bioscience
- Pharmaceuticals
- IT
- Materials and Engineering Science
- Archaeology

According to the ESS website the facilities can be:

“[…] compared to a large microscope, where neutrons are used to probe various materials. High precision instruments will enable detailed analysis under realistic conditions. ESS will enhance our understanding of nature. The results […] will be significant for future scientific and industrial progress.” (European Spallation Source, 2012)

The facility will be built in Lund, Sweden while the analysis lab will be located in Copenhagen. The construction phase will begin in 2013 and end in 2017 when seven of the instruments will be opened and a post-construction phase will take over with the facilities being fully operational in 2025. (European Spallation Source, 2012)

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12 Oral source Filip Jinnestrand – interview can be found in Appendix 01
**Fehrman belt**
The project will be at its completion the longest tunnel in the world, three times the length of the current champion, Trans-bay Tube Bar Tunnels in San Francisco (Fermern Sund Bælt, 2012b). The tunnel will reach from Rødby in southern Zealand to Puttgarden in Germany reducing travelling time from Hamburg to Copenhagen by an hour and a half (Fermern Sund Bælt, 2012).

**Oresund Bridge**
The idea to build a bridge between Sweden and Denmark had been discussed for decades until 1991 when an agreement was signed. Two years later the first constructors started working toward getting the bridge up and running. Slowly but surely the project was finished and eventually opened by Denmark’s queen Margrethe and Sweden’s king Karl Gustaf on July 1st 2000 (Oresundsbron, 2012b).

The company Oresundsbron has the main responsibility to own and operate the Oresund-bridge with an objective to repay the loan taken to construct the bridge in 30 years. Most of its income derives from road traffic while annual fees are received for rail operations. An indirect responsibility is to contribute to the “realization of the vision which was the driving force behind its political decision to establish a fixed link across Oresund” (Oresundsbron, 2012c). Continuing integration is said to be an important pre-condition for increased traffic, which will help realize the goal or repaying the loan. The vision is to make the Oresund region a powerhouse, attracting people to visit, live and work in. Meanwhile the business concept is to “build new bridges day by day – economically, culturally and psychologically” (Oresundsbron, 2012c).

**Infrastructure**
In this subchapter the infrastructure of the region will be looked at with a special focus on the Oresund-bridge not ignoring other means of transportation. Using a variety of sources a picture is created on transportation, labour and housing in the region. The first section is divided into three sub categories land traffic and the bridge, then air and last sea. Subsequently the labour and housing market will be under focus.

**Land Traffic and the Bridge**
There are essentially two phases in the bridges history to date; the first seven years where annual growth rates were between 10 and 17%. Still the growth was below
expectations until 2007 when the traffic became higher than predicted. Since 2008 a period of relative stagnation has been a reality, most likely caused by the financial crisis (figure 10). Upon the bridge opening a relatively large portion of people relied on the bridge for single travel (for travel rather than work), changes in currency valuation incentivized citizens of one country to travel to another in search of good prices. (Oresundsbron, 2011)

![Traffic and GDP](image)

**Figure 10 - Traffic growth at the Oresund-bridge and GDP – Source: Oresundsbron (2012)**

The composition of travellers gives some evidence of the increased integration within the region. The portion of people who commute cross the bridge has increased from 5% in 2001 to 42% in 2010 and people travelling for business has increased from 19 to 29% during the same period as seen in figure 11. This change was facilitated as; increasing house prices in the Copenhagen area opened the possibility for Danes to move across the bridge where the prices were more feasible. Furthermore workforce shortages on the Danish side created a demand which Swedish employees could fulfil. The bridge authorities also mention increased integration of the regions’ economy as a driving factor of growth without explaining it further (Oresundsbron, 2011).

Regarding railways around 180 trains pass the bridge on a daily basis, 85% of which carry passengers. Since opening the yearly railway traffic has grown by 8% per year,
with 2010 being the first experiencing a decrease (Oresundsbron, 2012d). While the bridge itself can handle increased rail traffic the infrastructure particularly on Kastrup airport, Södra Stambanan\(^\text{13}\) and central Copenhagen is unable to accommodate. Current forecasts estimate that the limit for car traffic will be reached around 2035. (Tendens Öresund, 2012n)

**Figure 11 - Purpose of Travel - Source: Oresundsbron (2012)**

**Air**

Copenhagen Airports runs the Kastrup (and Roskilde) airport situated near the Danish end of the Oresund-bridge. Its goal is to make the airport the main hub of Northern Europe in competition with locations such as Helsinki, Berlin and Amsterdam. In 2011 the airport served a record 22.7 million passengers (20.3 million international) up from 18 million in 2001 or a 26% increase (Copenhagen Airports, 2012). In the same year almost two million passengers used Malmo airport, an increase of 17% from the prior year, Aarhus in the meanwhile had almost 600,000 passengers (Swedavia, 2012; Aarhus Lufthavn A/S, 2011). That shows how the Copenhagen airport serves passengers from southern Sweden and entire Denmark. As an example British Airways advertises “Sweden another reason to fly to Denmark” (appendix 06).

\(^{13}\) [http://www.trafikverket.se/Privat/Vagar-och-jarnvagar/Sveriges-jarnvagsnat/Sodra-stambanan/](http://www.trafikverket.se/Privat/Vagar-och-jarnvagar/Sveriges-jarnvagsnat/Sodra-stambanan/)
In comparison all airports in Stockholm served 24.1 million passengers in 2011 an increase of 22% from 2001 (Stockholm Business Region Development, 2012). Of the 14 million passengers that Arlanda airport served 11.3 million were international or 81% (Swedavia, 2012). The Copenhagen Airport therefore grew 18% faster than the Stockholm region and 9% faster than Arlanda airport.

According to research made by European Spatial Planning Observation Network, Oresund is number 106 as a multimodal accessible region in Europe and therefore the highest in the Nordic countries mainly due to the Kastrup airport. Gothenburg and Stockholm rank number 563 and 739 respectively. In regards to air travel it is on par with places like Hamburg while road and rail is not at the same standard. The future development of Oresund still rests more on developments of Kastrup as an international hub rather than on road and rail. (Tendens Öresund, 2012a)

**Sea**

Copenhagen Malmo Ports (CMP) serves the Oresund region with infrastructure and by exploiting business opportunities in the Baltic Sea region, a gateway to over 100 million customers. It meets demand for transportation of consumer goods, vehicles, fuel, building materials as well as passengers for example coming on cruise ships. Since 2001 the company has increased its sales by 70% (Copenhagen Malmo Port CMP, 2009).

The opening of the Oresund-bridge was believed to be a death sentence for the ports and expectations were that revenues would shrink by 15-20%. The reality turned out to be quite the opposite and according to Leonard Pettersson, the deputy director of CMP, the ports saw they could share costs, work together and attract new customers. Flexibility and specialization was increased by offloading in one country and then drive the products across the bridge, therefore the ports were merged in 2001. The CMP has furthermore invested heavily on both sites of the strait. (Öresundsbro Konsortiet, 2010)

Other ports exist in the region though only the CMP are featured.

**Labour Market**

The labour market of Oresund is the largest coherent market within Scandinavia, providing a recruitment pool for knowledge intensive work in a region with 14.000 researchers, 155.000 students and 12 higher education facilities. Education ranks high at the political agenda of both Sweden and Denmark. While labour unions have a bad
reputation in most parts of the world they have provided stability in Scandinavia. Flexibility of workforce which is high and Denmark is positioned number four while Sweden rests at 37. The labour pool is very mobile with both Danish and Swedish employees having among the shortest average tenure within OECD. (Copenhagen Capacity, 2011)

In 2010 over 20,000 individuals commuted to work or school which is a ten-fold increase from before the bridge. The trends have understandably been much in line with total number of travellers, with high growth up until 2008 and stagnation since. The commuting is quite one directional with 96% of travellers going from Sweden to Denmark. Although these are both Swedish nationals looking for well-paid jobs on the Danish side and Danes seeking cheaper housing in Sweden (Öresundsbros Konsortiet, 2011). While most commuters live in Sweden; 37% of the commuters are Danes and 40% Swedes. The former are more likely to travel by car than the latter. In the future labour shortages are expected on the Danish side and commuting is expected to be driven by labour market integration rather than housing market. (Tendens Öresund, 2012b)

Copenhagen attracts Swedes with not only higher salaries but also a more diverse market. Some small businesses have on the other hand sought to move their operations to Sweden in search of lower cost of living. In a report by the bridge it is claimed that commuters are generally young, well-educated and well-paid (Öresundsbros Konsortiet, 2011). As a sign of that 63% of commuters in 2008 were between the age of 25 and 44. These individuals were employed within all sectors but 60% of them in IT, telecommunications, research, trade and transport (Oresundsbron, 2012). Furthermore 38% have university education, compared to 30% within the region, and 47% upper secondary education or vocational training. Gender distribution is 60% males and 40% females. (Tendens Öresund, 2012b)

In 2007 the number of Swedes getting their first job in Denmark peaked at over 6,500 individuals, by 2010 the number was down to below 2,500 (Oresundsbrom, 2012). For some reason the statistical agencies do not consider the cross border employment in official figures of labour market statistics (Tendens Öresund, 2012h).
Real Estate Market

Prior to opening the bridge it was believed that housing prices within Oresund would eventually align but that has not become reality. On the Sweden side prices did rise 119% since 1999 while on the Denmark side the increase has been 134%. The greater Malmo region was in 2007 around 35% cheaper than the greater Copenhagen area while the differences are currently around 5%. Economic factors have proved a deciding factor as the number of people moving between countries correlates substantially with changes on the housing market. Danes however move back and forth depending on various but mostly personal factors (Oresundsbron, 2012e). The people moving across the strait are generally people with relatively young families with the age group between 25 and 34 being the biggest (Tendens Öresund, 2012m).

The price of living is furthermore cheaper on the Sweden side with cost of running a car for example lower as well as grocery shopping (Oresundsbron, 2012e).

Trends

This section aims to get a better view of the economic realities within the region along with improved information on the importance of the area for the economies of Sweden and Denmark respectively. The website Trends in Oresund (d. Tendens Öresund) gives statistical and analytical information on the region, for example demographics, economics and transportation. The site claims that despite increased integration it is too early to speak of “a functionally integrated economic unit” (Tendens Öresund, 2012c). The section will be split into five subchapters where the focus will be on the economy, demographics, composition of sectors with a special focus on knowledge intensive work and last new venture creation.
Economy

As mentioned the Danish site of Oresund accounts for 48 per cent of Denmark’s total GDP and the capital itself contributes 37 per cent. The importance can therefore not be understated on a regional as well as national level and the portion of the national GDP has become ever more significant since the bridge. During the same period the Sweden side has experience an even greater increase on GRP (gross regional product) growth per employed person or 39% as opposed to 24% on the Danish side. This is partly due to economic difficulties in the beginning of the period (a certain catch-up effect) and drastic transformation of the business sector. On the Danish side economic downturn in the beginning of the century and earlier transformation of business environment has had its effects. Figure 13 gives an overview of trends of GRP on both sides of the strait. (Tendens Öresund, 2012c)

![Figure 13](www.tendensoresund.org)

Oresund has experienced slightly better results than the European Union with 32% increase in GDP in the region compared to 30% of the EU during the period 1995-2006. On the other hand Helsinki and Stockholm have experienced growth of 70 and 60 per cent respectively. Since 2006 the national economies of Sweden and Finland have understandably experienced higher growth than Denmark. (Tendens Öresund, 2012d)
The composition of the population on either side of the strait is fairly similar with Denmark having higher percentage of the population in the group 25-44 and smaller percentage of teenagers than the rest of Denmark. In the meanwhile Malmo has a relatively large portion of people between 22 and 24 but a lower portion of people between 50 and 60. The average age on both sides is around 40 years of age (Tendens Öresund, 2012j).

While a relatively high portion of the population in Oresund has higher education or around 33% it is low compared with Stockholm and Helsinki where the portion is over 40%. The intra Oresund numbers on the other hand show that over 40% of population of greater Copenhagen and Malmö areas have university education. The numbers for some locations within the Oresund region are below 17,5% such as Falster. Both Sweden and Denmark have set goals to increase the number of population having university degree to 50%. Within the region, on both borders, are universities that play leading roles within Scandinavia, Europe and globally. (Tendens Öresund, 2012g)

Composition of Sectors
The composition of economic activities has changed substantially in the recent past. Industries that were important in the past have become minor while others increased substantially. For example knowledge intensive industries such as financial services, telecommunications, whole sale and R&D have become a greater share of the composition of the value added. On the other hand; mining, agriculture and textiles for
example have decreased. Figure 14 shows composition of value added\textsuperscript{14} divided into five different sectors; agriculture, labour intensive, knowledge intensive, public sector and culture in three geographical regions within Oresund. A quick observation can be made that natural resources are fairly unimportant to the economies and services constitute a greater part of the region’s economy. Full breakdown can be located in Appendix 07.

![Bar chart showing composition of value added by sector in different regions.](image)

**Figure 14 - Growth by sector - Source: Author**

Analysing the data further some interesting figures can be identified from looking at the full table. In the capital region three sectors, all from the trade category, have particular impact, that is; first transport, travel, post and telecommunications (12.7%), second financial operations (11%) and last real estate, business services and R&D (21.6%). The numbers behind each category indicate the portion of the local value added (the capital region, not Oresund). It is interesting to note that financial services have grown substantially in greater Copenhagen area but that has not been the case the other two regions. Still all regions have experienced great growth in the category ‘real estate, business services and R&D’. In comparison with Copenhagen’s financial services

\textsuperscript{14} Gross value added is defined as the value of output less the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector; gross value added is the source from which the primary incomes of the SNA are generated and is therefore carried forward into the primary distribution of income account. (OECD, 2001)
Skane has 23,3% of its value added in the section (real estate, etc.) and Zealand 18,5%. Along these notes whole-sales and retail account for 14% of the value added for the entire region with little variance between individual parts. (Tendens Öresund, 2012c)

Overall the regions have experience positive but different experiences in the value added. The Greater Copenhagen Area has seen the 42.5% growth during the time period 1993 to 2007, Zealand 26% and Skane 61% growth. (Tendens Öresund, 2012f)

**Knowledge Sector**

With global production moving to Asia in the past decades, wealthier economies have set more emphasis on high-tech industries. The Scandinavian countries have tried to move their economies into this direction with companies such as Ericsson, Nokia and Novo Nordisk all doing well in different knowledge based sectors.

When comparing regional high tech environment; Oresund is in 10th place of 163 regions in Europe with just short of 100.000 employed persons, the highest in Nordic countries. Judging a sector by the number of employees may be somewhat misleading; therefore a specialization calculation was created where one is the average for Denmark, Sweden and Finland (Tendens Öresund, 2012f). This calculation shows that Stockholm’s and Helsinki’s high tech specialization is 50% above the average, while Oresund is 16% higher than the average. Still the strongholds of Oresund are largely within few concentrated sectors where the indicators are far beyond the average while the other locations have more but less extreme capabilities. Taking a closer look at the figures, it appears that the value added process is greater in the comparing locations and greater effects are reaped from R&D activities (Tendens Öresund, 2012f). Figure 15 shows the total specialization for Oresund along with its most important regions, Copenhagen and Skane along with Stockholm and Helsinki for comparison. (Tendens Öresund, 2012f)
In appendix 08 for the full table with indicators for individual sectors can be found. As mentioned Oresund doesn’t have as extensive advantage as the others the region is extremely strong in few sectors. The region can boast of great performance in pharmaceuticals, technological manufacturing and medical equipment on the Danish side and specialized manufacturing, natural sciences and technological research for example in telecommunications on the Swedish. Having great capabilities in R&D along with high tech production in Oresund should allow the region to retain significant local economic impulses in the future. (Tendens Öresund, 2012f)

The R&D investment counts for 3.9% of GRP which is slightly lower than in Stockholm where it is 3.99% and places Oresund in the 11th positions of regional GRP within Europe. The Oresund region can hardly be considered as integrated as Stockholm and Helsinki and therefore there are possibilities that increased scale effects can be reached (Tendens Öresund, 2012f).

**New Venture Creation**

Compared to the rest of Europe, Sweden and Denmark have relatively low number of newly started companies, though the Oresund region has a higher number than the national averages in respective countries. The number in Copenhagen is on par with the one in Stockholm while Skane is a bit lower. In 2006 a total of 24,000 new companies

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**Figure 15 - Specialization index - Source: Author**
started in the region, a third in business services, 29% in trade, hotels and restaurants and 15% in construction. (Tendens Öresund, 2012i)

Studies have shown that companies generally invest in other countries to gain access to markets with the service sector being of high importance (Tendens Öresund, 2012i). The number of Danish owned companies on the Swedish side of Öresund has increased substantially, from 200 when the bridge was opened to 700 in 2008. Of these companies 40% are in trade, hotels and restaurants, 25% in finance, real estate and business services. On the other side 29% of foreign owned workplaces are owned by Swedes. (Tendens Öresund, 2012i)

**Perspectives**

Giving some perspectives to the impact of the bridge professionals have expressed their opinions as for example the CEO of Öresundsbron Caroline Ullman-Hammer claims that:

*The bridge has meant a lot for the region. The building of it gave a boost to both Malmö and Copenhagen. It has also been important to our region’s university and for the development in both cities. Historically infrastructure has always propelled progress.* (Oresundsbron, 2010)

The director of trade and industry for the city of Malmö, Pehr Andersson says that:

*The bridge has turned this [the region] into a single job market. The bridge has erased all borders. Today we’ve got a single job market, and it’s great.*

(Oresundsbron, 2010)

Christian W. Matthiessen, a professor at the University of Copenhagen explains the possibilities for the city:

*For Copenhagen, the Oresunds bridge has opened up so many possibilities. It has provided access to manpower from southern Sweden to businesses and universities. It also has turned Copenhagen into a very competitive big city. It holds its own against Stockholm and other big European cities.*

(Oresundsbron, 2010)

The mayor of Malmö, Ilmar Reepalu, who was influential in the decision of constructing the bridge is in little doubt about its qualities:
We no longer talk about Malmo as the Sweden’s third-largest city. We’re now in Scandinavia’s most densely populated area. We’re the most buoyant region in Scandinavia. We produce 26-27 percent of Sweden and Denmark’s joint GDP” (Oresundsbron, 2010)

Conclusion

The secondary data has provided this research with a great deal of information about different aspects of the region. Luckily there are a number of institutions that collect both qualitative and quantitative information on the region. From the data several conclusions can be made. First, the two labour markets have integrated nicely with a tenfold increase in commuting since the opening of the bridge. This has mainly been driven by economic factors that create an incentive to cross the strait in search for better pay and more diverse labour market. The traffic is still quite one directional as the incentives become sort of barriers going the other way. In the meanwhile employers have gained a pool of employees that help against shortages. These shortages have been felt before and are according to OECD likely to return (2009). Second the region has experienced prosperity the time period since the opening of the bridge where especially knowledge intensive industries have strengthened in concentrated areas. Still in comparison with cities such as Stockholm and Helsinki still much work remains to be done. All initiatives to create a single cluster have failed apart from Medicon Valley and that is alarming. This has been discussed in the chapter about Oresund University and Region Oresund. Third, new venture creation and market scope is still quire unclear. While the data claims an exponential growth in Danish companies on the Swedish side and according to the Tendens Oresund they should be attribute to being closer to the customer these need to be looked into. Fourth and on the similar note, the networks need to be analysed. Are they merely within each border region or are they connecting.

Some of the hypotheses have already received fairly good coverage by using the secondary data while others will need to be looked into using the interviews.
Primary Data
The primary data is intended to supplement and enrich the data provided above. The methodology gives guidelines for the interview though some changes had to be made in practice. Some analysis and subsequently conclusions were made between interviews and therefore the questionnaires (appendix 09) were improved to get information where clarity was lacking. As per the methodology respondents were told they could expect an interview of half an hour though a full hour was requested from their schedule as a precaution. In practice the interviews took around an hour making the total time taken from respondents schedules even longer. In the following is an overview of the interviews with word clouds and analytical abstracts.

The interviews are in chronological order.

Filip Jinnestrand – Oresund Committee
The Oresund committee was contacted as they are considered the only governing body of the region. A representative of the institution pointed to Filip who could give valuable information. Prior to analysing the interview some biases need to be accounted for; first and foremost the Oresund Committee has the goal to promote the region and the answers could therefore be coloured. The likelihood of Filip would for example criticize what the committee does or what is going on in the region was limited.

The Word Cloud (figure 16) shows that Filip frequently compared the two sides, mainly at country level. The interview was therefore concentrated mostly on macro environment with the region as a single unit and how different parts of it work together. This was also related to discussion on infrastructure, co-operations, and transportation. The last can be seen in words like “live”, “working”, and “bridge”. Filip also talked about challenges that seemed to be mostly related to areas where integration could be stronger which will be discussed further below.

Filip acknowledged that the labour advantages benefitted mostly the Swedish employees with a more diverse labour market especially for educated people, bigger pool for employers to choose from and uneducated Swedes helped man service jobs in Denmark. The Danish have benefitted from a bigger and cheaper housing market and cheaper products only a short travel away.
Malmo area has transformed from being an industrial part of Sweden to a knowledge city. Having access to a larger market increases options for buyers and sellers but also encourages cooperation between players on all levels. Filip assumes that this would increase for example knowledge transfer as the increased proximity would increase the possibility of creating and sharing knowledge. The knowledge region with strong infrastructure because of the bridge and train system would make transportation within the region easy while the Kastrup airport eases transportation to and from it.

Oresund committee is the secretariat for the municipal governments in the region with limited authority. The organization is a political one and its role is more of providing direction than action. The committee needs to work closely with the national
governments to improve the conditions in the region bringing politicians and businesses together. Still nations have contradicting needs to the cooperation; for example Oresund University did not work as the direction of student exchanges was mostly from Sweden to Denmark with students of the former benefitting at the cost of the latter. Therefore the changed law caused the organization to close. Furthermore different currencies increase the economic differences and Sweden has for example benefitted from staying out of the Euro and a large difference between currencies provides an incentive to commute to Denmark. On the other hand some positive steps have also been taken such as that the Danish congress will consider all new laws in the context of Oresund so complexity doesn’t increase.

Regarding the successes of cooperation Filip mentioned the ports, Medicon Valley and ESS (all featured in the secondary data) as glimmering examples. Filip points out that for example the last one would never have been possible if the either side would’ve tried to get the project on their own. The cooperation therefore replaces competition in many aspects and can for example attract investments and customers across borders.

As ÖRUS and the Oresund committee have focus areas it was interesting to ask Filip about from where these had originated, with resources and capabilities or if they were political decisions.

These [clean-tech industries] are of course certain areas that we want, we see that we have first of all the resources, we have the knowledge both in terms of universities and companies that work within these sectors [...] The politicians on both sides have realized the main common objections and this is of course structured around green growth environment so that everything that we do should be within these areas.

The comments are interesting in a variety of aspects. First the former sentence where the industries are chosen because of resources and capabilities but the latter where it appears that the politicians appear to have chosen categories that sound good.
Ulf Anderson PhD – Strategy

Ulf Andersson was chosen as is a scholar of strategy researching Swedish industries. He divides his time between Copenhagen and central Sweden and has no special connection to the Oresund region. While a deep understanding of the region was considered a benefit for the specialists the lack of connection gave Ulf certain objectivity. Ulf’s word cloud can be found in figure 17.

The interview with Ulf centred largely on strategies and looked both at what companies are doing and the strategic position of the region as a whole. For example comparisons with Stockholm were common and how Malmo and Copenhagen have increased their influence. He also talked about the economic factors, incentives for Swedes to cross the border and so on. Words like “easier”, “closer”, and cheaper” were largely to explain the effects of the bridge.

Ulf was still a bit sceptical that every success can be attributed to the integration. The cost of capital is not believed to have changed since financial theory existed long before the bridge. Customers are also not believed to have become more sophisticated or anticipatory to much extent as a cause of integration as such but more because they have an access to a larger market. The access has therefore been increased but the customers, particularly in business to business environment take similar decisions as before. A company will for example find the best supplier regardless of where he is.

Ulf sees the two regions to have been pretty similar, most industries exist on both sides though there is more of the industrial manufacturing on the Swedish side. The economic factors have created different incentives depending on where you live and work. Economic theory would say that certain equilibrium should be reached but Swedes are still getting 20% higher salaries in Denmark. Ulf also points at the flip side as the Danes don’t see an incentive to work in Sweden and live in Denmark. Should that change the flow of commuting would perhaps change. The different currencies and economic cycles have therefore created an incentive and is to some extent an advantage more than a disability.
As there appears to be a difference in factors costs Ulf was asked why there weren’t examples of Danish companies offshoring and outsourcing production across the strait. The difference was considered not to be large enough as risk increases as well. Companies would either rather hire Swedes who would then to Denmark with much lower risk or move the production to countries where the differentials are larger such as the Baltics.

Whether the scope of the companies has changed with increased integration Ulf considers that to be case specific. Companies that need to be close to their customers such as consultants should set up offices across Scandinavia, perhaps Oslo, Stockholm and Oresund that covers the region and each has its influential area. The Oresund office would therefore cover Denmark and southern Sweden. Mainly companies would build their operations around their business model but not what had happened in the region though that would be taken into account.
The biggest difference was considered to be the increased significance of the region and that the influence area is bigger. Malmo can to some extent be considered a satellite city of Copenhagen and therefore it wouldn’t be wrong to say that the Copenhagen area is gaining influence. The border of where people or companies rather look to Stockholm than Copenhagen has moved north. For example the people of Gothenburg are considered to be more likely to fly to Copenhagen now than Stockholm if they need to change flights. Having said that Malmo and Copenhagen will never replace or substitute Stockholm but rather that the relationship between cities in Sweden has changed. Malmo is believed to have become more influential and that for example investment should flow more to the region at the expense of Stockholm.

**Peter Munkholm Nielsen – Copenhagen Capacity**

Peter is an analyst at the inward investment agency Copenhagen Capacity that was featured in the secondary data. The biases that such an institution can display is first and foremost that they promote one side of the region and don’t try to hide it.

As can be seen from the Word Cloud the concentration was more on Copenhagen and its position within the region. Words like Sweden, Malmo and Oresund were not as much discussed as other respondents. In the meanwhile clusters were mentioned whether they are specific, within the region in question or the phenomenon in general. The interview therefore had a focus that was mostly on what the agency is doing and how it attracts companies. It has to be mentioned that the questions pointed the discussion toward regional identity and the interview was not as broad as the previous ones. Peter’s Word Cloud can be found in figure 18.

Peter describes the difference between the two economies as that on the Danish side has more small companies, services and is more diverse while the latter has more industrially oriented firms. Both regions have their strongholds but generally they are quite similar and externally the potential investors see them as more or less the same. One of the advantages that Copenhagen has over Malmo is its capital status with its benefits that comes from that.
Copenhagen capacity has threefold goals; first to promote investment to Copenhagen and Zealand, second to attract talent and last to further develop clusters. The last is reached with cluster initiatives such as Medicon Valley. The valley brings together the people working in companies on both sides of the strait. It has some networking aspects that could be considered helpful in promoting knowledge resources and even competition through rivalry. Peter still mentioned that clusters are to some extent only on one side and whether they worked across borders was questionable.

The agency’s focus is both on industries and markets, attracting investment within specific fields and certain countries. The promotion of the region is done on two levels. First the regional level as Oresund as Invest in Skane and Copenhagen Capacity have
for example joint booths at conferences and then the individual level where Copenhagen Capacity tries to attract investors to its side. The first stage is therefore one of cooperation and the latter of competition. The region is promoted as one with the market and talent pool of southern Sweden as a unique selling point available to Copenhagen. The value in the eyes of investors is considered to be high. From the perspective of companies coming into the region; Scandinavia is viewed as a unit where a regional headquarter needs to be established. Comparing options they look first location specific factors, then sector specific and finally at the company specific factors. The region has made steps to facilitate registration with a one-stop-office, translation of documents, legal and tax advices provided by Copenhagen Capacity which is highly valued by investors.

The prosperity of clusters, availability and attraction of talent along with increased investment are according to Peter connected as clusters attract talent and where the talent is clusters are likely to blossom. Both the talent and the clusters therefore attract investment. One attracts the other. The region differs in many ways from some of its competitors as major tax incentives are not granted. The message that is being sent is that the quality of the environment is well worth the cost. Still the region is often at a similar price range as competitors. The perception of the Oresund region abroad is that it has a strong position in clean-tech and food sciences. The latter has been helped by the success of the restaurant NOMA\(^\text{15}\) and different products associated with Denmark such as bacon.

Companies that utilize Copenhagen Capacity often work within different sectors than the institution’s focus areas but Peter claims that everyone is welcome and no one is turned away. Still he acknowledges that a lot of political capital is invested in the regional co-operation and that different industries get funds and subsidies, which points to that the local politicians are trying to pick winners which Porter warns against.

The biggest competitor to Copenhagen is surely Stockholm according to Peter. The advantages that companies seek are often very case specific and therefore for example the airport may be vital in one case while of little value in another. The geographic scope of operations appears to be different as well.

\(^\text{15}\) A Copenhagen restaurant chosen the best one in the world for the past three years.
Eskil Martensson - Region in Skane

Eskil works as an interregional coordinator for the regional development of Skane mainly working to coordinate the cooperation with Denmark and to get politicians an overview of developments. He has been with the organization for a long time and has seen the evolution of the region.

Looking at the word cloud it can be seen that the word ‘think’ was used very much as well as the word ‘opinion’ which shows that Eskil talked a lot about his own feelings on the subject. That proved very helpful as he had strong opinion on how things had gone right and where adjustments could be made. He furthermore used the word ‘now’ fairly often and draws a comparison between current situation and how things had been intended in the past. The words ‘level’, ‘organization’ and ‘political’ also explain that the interviews discussion was very much talking about Oresund from different levels and perspectives.

Eskil started by talking about the Oresund Science Region initiative that had run its course and expressed that he believed that the common clusters of Oresund have not yet been defined. The focus areas appear to be based largely on political decision although capabilities exist. As initiatives hadn’t worked out no discussion had taken place on what would replace them and that was a large step back for the whole region since what had been gained could also be lost. The place of the Oresund Committee’s as a political institution was considered by Eskil to be a driving force in starting initiatives that then were passed on.

When asked about the challenges of the Oresund region Eskil mentioned legal environment and taxes. He tells of the demands of interest South Swedish Chamber of Commerce who believe the biggest issues of integration are the ones of workers. The different legal environment has proved a complex factor as companies that tried to operate in both countries eventually stopped as it was problematic to react to two sets of legislation rather than just one.
It was obvious from talking to Eskil that his concern is largely for the entire Oresund region and not just Skane. While he doesn’t deny that Malmo is a sort of a satellite city of Copenhagen he says that it is not how they see themselves. Promoting Oresund is not just about Copenhagen and the combined region has created a critical mass. As Peter Munkholm talked about the advantages of being in Denmark, Eskil points out that in Malmo you get to be in Sweden, Scandinavia’s larges country, with a close connection to their neighbour to the south.

The relationship between Malmo and the Swedish capital was discussed and Eskil believes the city has to convey messages to the politicians in Stockholm that they are the second engine of the country and should be respected since two driving forces are
better than one. Oresund has changed the Swedish arena and that is good for the country as well as the region.

Asked about what had surprised him in this time since the bridge Eskil provided a theory that was of great interested to the author. The project had started with a political vision, the next step was to build the infrastructure and “then everybody thought ‘when do we get integration?’” but the success was limited to begin with. With the economic boom few years after opening the bridge the economic incentive was created and the demand increased the pace of integration. The market therefore has to be combined with integration to combine the two economies. Initially the aim was mainly on building the infrastructure and not on the softer things, the problems of different legislation for example came to some extent as a surprise to authorities. Today the integration should be an on-going process and if it isn’t helped it might go in reverse. For some of the players in the region the only thing necessary is to remove barriers but others need to be helped more for example researchers and students.

**Sven Junghagen PhD - Marketing**

Sven Junghagen is an associate professor of marketing at Copenhagen Business School. He was originally contacted as he has knowledge within the field of strategy and marketing, lives in Malmo and did his PhD project on regional development. Sven started the interview by explaining a little bit about his background and his time at the Scandinavian Academy of Management and Strategy, or SAMS for short. The main drive behind the organization was the development of the Oresund region and research on the development of transnational regions conducted. Sven worked on projects regarding regional marketing strategies among others and was involved in some of the earliest initiatives.

Looking at his word cloud (figure 20) it is clear that he mentions ‘now’ and ‘back [then]’ to draw comparison with what happened around and before the opening of the bridge and what the current situation is. Sven also talks a lot about the geographic locations, along with terms like “region”, “national”, “local”, “decisions” and “level” amongst others. This shows the comparison he draws between different regions and levels of decision making and different perspectives that affect the region.
Sven starts on a similar note as Eskil ended that integration has been mostly in a form of improved labour market for Swedes and lower prices for Danes. He also adds that Oresund is much more important to Swedes than it is to Danes and even goes so far as to say that Copenhagen has more influence on his life than Stockholm ever would being a Malmo citizen. The Swedes have perhaps felt the integration more and have a stronger feelings to it. Sven agreed with Malmo being a satellite city of Copenhagen and that with the bridge the influence area of the Danish capital has increased at the cost of Stockholm. He mentions that the dynamics of the region have changed and companies consider Malmo and the region as a possible destination for regional headquarters like IKEA and Mercedes Bens with e.g. access to Kastrup airport being an important factor.
The barriers of trade are in Sven’s opinion many; he mentions culture and language as a factor that cannot be ignored though that line is blurring more and more. Political factors are mainly with opposite interests of parties that need to be consulted to make changes. Danes aren’t perhaps as cooperative in this figurative matrimony as the Swedes as they don’t feel as integrated as their counterparts. The decisions makers in Skane on the other hand have to rely on decisions that are made in Stockholm. Some sort of agency problem appears to be present. Sven feels that more is said than done by Stockholm so pretty plans are useless if they aren’t followed up. Furthermore the legal system is causing problems along with economic factors. Joining the euro would perhaps help simplifying the region but would be disastrous on another level.

Sven gave valuable information about how the decisions were made at initiatives conception, having been part of the inner circle. While some of the decisions were taken looking at internal capabilities many of them were created to sell to politicians and public. The Oresund Science Region was first developed without having much content; it sounded good and was accepted. Then the SAMS people were asked to add content and a propeller with four ‘arms’ was created as a symbolic engine of the region. The first three; agriculture, life sciences and IT were based on perceived capabilities while the fourth proved more problematic but clean tech “sounded good”. Even though most of these have been constructed upon capabilities their choice appears to be mostly a marketing issue.

The goals that were set up at the beginning have hardly realized. Sven feels that the resources given to the initiatives were weak and therefore their success was limited. Oresund University should for example, in Sven’s opinion, receive the right to accredit degrees but that required change of legislation, with more power that could have been pushed through. All the initiatives that have been mentioned have either come to an end or are about to. Asked about the tag line of the Oresund bridge – ‘building bridges every day’ he believes that that has not come true. Still there are in Sven’s opinion brilliant examples of success such as the Copenhagen Malmo Ports.

Sven was asked about the theory of Eskil Martensson that about the infrastructure not being enough and that demand had pushed the integration but more needed to be done to create cross border networks to further develop clusters and connect students and researchers on both sides of the strait. Sven agreed with the theory and adding that more power was needed for successful initiatives.
Sara Virkelyst - Oresund University

Sara is projected manager at the Oresund University that will soon cease to exist. She provided information about the platform and its operations. Since her interview was limited in comparison to others both in scope and time, a word cloud was not created.

The reason for the closing of the umbrella organization in August is changed legislation about free moving students to Denmark. Interestingly a year ago the organization was instructed to look further into educational development. That will obviously not happen.

Some success stories can be presented as fruits of the co-operation, networks have been created and projects that reaped positive results. The *Oresund Summer University* for example attracted exchange students from outside the region. Students within Oresund on the other hand generally feel that their time would be better spent elsewhere or in the words of Sara; “*why go to Copenhagen when you can go to New Zealand*”. Students did not see the opportunities and lacked incentive to participate in regional cooperation. Furthermore the ones that commuted to a semester in a university across the strait found it financially impossible.

Sara points out that at the opening of the bridge there appeared to be a great need for the institution but networks have been created and they will live one though new ones will not follow them. She also asks what is gained from “total integration”.

**Conclusion**

The interviews provided information and particularly perspectives that the secondary data either did not or could not. From them some conclusions can be made such as initiatives across borders have been both weak and unsuccessful. Many initiatives were started in different fields and while their discontinuation may not be all bad, few initiatives appear to be constructed to increase integration. The advantages appear to be mostly in the form of a bigger market particularly regarding labour. The inward investment agencies and the Oresund committee respondents also mention a more significant market to attract further investment. On the other hand there are few examples of connections across the strait. In the analysis chapter these topics and more will be discussed.
Analysis

During the process of this research it was discovered that the Diamond model and the methodology constructed on its base, would not be able to clarify the situation in the Oresund region. The model had served its purpose as a guiding tool but the data was pointing in new directions. The learning of the research had therefore been to some extent outside the scope of the original research question.

The decision was therefore made to add complementary research question to guide the analysis. The additional research questions are:

- Where are the major shortcomings of the integration?
- Why has the integration either failed or succeeded in those areas?
  - Is there a principal-agent problem in the Oresund cooperation?
  - Are there networking problems that can be identified?

Subsequently other theories were added to answer those questions. In the second theoretical search a proven methodology by the Canadian National Research Council was identified as a proven tool to measure cluster activity (Arthurs, et al., 2009). Other theories and models identified to analyse problems were:

- *Agency theory* to look at the principal agent situation within Oresund.
- Theories regarding *Regional Innovation Systems* and *networks* to identify how the regional system was working. In this analysis theories about policy were added.
- *Triple Helix* to look at the relation between state, industry and academia.
- *Regional Identity* which looks at the composition of the region and how it is perceived externally and internally.

The supplementary theories were all added to the theoretical review. The NRC model has some qualities over the Diamond framework as it has a more detailed view on the cluster with easily identifiable indicators. It also takes into account factors like networking and policy to larger extent. The model (which can be found in figure 3 in the theoretical review) is split into two groups and each divided into three constructs. The former, *current conditions*, is split into *supporting organizations, cluster factors* and *the competitive environment* while the latter, *current performance* is split into *cluster dynamism, significance* and *interaction*. Each of the construct is divided into
sub-constructs, which gets weighted measures (a fraction) that together add up one (1),
the sub-categories are then divided into indicators that are also weighted together
according to indicators provided by the model. Each indicator is given a value between
one and five. For example the human resources have the weight of 0.5 of factors and
therefore contribute half of the construct value, the human resource indicators are
access to qualified personnel with the weight of 0.6, local sources of personnel with
0.4. If the former would get the maximum value of five as an example and the latter the
minimum value of the one the sub constructs value would be three point one
(0.6*5+0.1*1=3.1). That number would therefore add one point fifty five
(3.1*0.5=1.55) to the factors. The maximum value of the model is therefore 30 and the
minimum six. For further explanation see appendix 10.

As gathering indicators has not been within the scope of this research the model was
used in a qualitative way. Each sub construct will be discussed at the end of the analysis
to create a holistic picture of the environment. The analysis point of view will be the
effect of integration on indicators and constructs as per the research question. Different
weights will be used to show importance but no calculations made.

The analysis section is therefore set up by first using the Diamond framework and the
conclusion of the 12 different hypotheses and therefore following the proposed
methodology. This analysis will lead to certain conclusions both that will be taken
forward but also point to problems that need to be analysed further. There the
supplementary theories will take a closer look at the problems and provide answers. The
NRC model will then provide an overview of the regional development to make up for
the shortcomings of the Diamond. In the subsequent chapter conclusions will be
presented.

**The Diamond**

In this analysis each force in the diamond is presented along with the hypotheses that go
along with it. Each hypothesis will then be either supporter, rejected or determined to be
inconclusive. The fact that a hypothesis is rejected does not necessarily indicate that no
connection is between factors as some of the hypotheses proposed a negative correlation
and if such a hypothesis was rejected that would possibly show that a correlation did in
fact exist. Subsequently conclusions were made with limitations and further directions.
Factor Conditions:

Hypothesis 1:

The human resource pool has integrated with an effect on both quality and quantity.

The most compelling argument toward answering the hypothesis positively is the tenfold increase in commuters since the opening of the bridge. The labour pool is therefore been used effectively across the region, although the flow is mostly one directional.

Oresundsbron makes the claim that commuters are generally “young, well-educated and well paid”. While the claim isn’t wrong as such the ‘well educated’ part is somewhat misleading. The composition of commuters is largely two-fold; people with university degree (38%) and mainly young people, with 63% being in the age group 24-45 (many obviously fit into both groups). It is assumed that commuters are hired for two reasons; for being either more qualified or cheaper in terms of cost. The questionable assumption is made that education creates quality and uneducated workers are somewhat of a commodity. First it has to be mentioned that while education level is 30% in the Oresund region it is 40% in Malmo and Copenhagen and therefore the commuters are more or less in the average in regards to education. Furthermore if it is assumed that the 38% are attracted to Copenhagen because they are qualified the other 62% are attracted because either because they are cheaper than comparing Dane or because there is a labour shortage. It is assumed that without labour shortages the commuters would be substantially more educated than the regions average as they would cross the strait as they were more competent. This view is held by the respondents.

Initially it was believed (but not included in the hypothesis) that the different regions had different capabilities that would supplement each other. None of the specialists confirmed that. The regions industries appear to have been fairly similar prior to the integration. The quantity available to the employers has surely risen along with a higher number of qualified employees. The integration of labour markets has therefore averted shortages more than supplemented opposite sides.

Employees on the Swedish side have gained from increased options and higher salaries on the Danish side. As the commuting has been fairly one directional it cannot be said that Danish employees have gained options on the other side or a potential for higher salaries. Their potentials have mostly been in the former of lower cost of living
especially when Denmark experienced increasing housing prices. At the time the bridge provided an option to “let some of the air out” with people moving to Sweden and therefore have a little fewer individuals left on the market. The different economic cycles have provided incentives for the Swedish job seekers to cross the straits but hardly any for Danish. Ulf Anderson talks about a 20% increase of pay for a Swede crossing the strait, which would be a similar loss for the Danes going in the opposite direction.

The actual quality of the human resource pool did therefore not increase with integration but the pool is surely larger and has been optimized further. This is largely in line with some of the advantages both Marshall and Krugman talk about. With different economic cycles on either side of the border the employees will fill openings as they best see fit and strengthen the entire region as a result. The labour market is furthermore considered fairly integrated as a large amount of people travels across the strait to fill positions. The regional market works better than the local ones separately.

The hypothesis cannot therefore be supported as it stands but the labour market has strengthened and optimized. The hypothesis will not be used but the information from it will.

Hypothesis 2:

*Physical resources remain unaffected by the increased integration.*

To answer this hypothesis primary data from interviews was used entirely.

The increased integration has not given players in the region access to any resources mentioned in Porter’s definition. The only part of the definition that could possibly be seen as to have changed is “location in relevance to others”. Still this relevance is mostly by perception and furthermore limited to road travel. The support is therefore so minimal that it has to be ignored.

The hypothesis is therefore supported as physical resources remain either completely or at least largely unaffected by the increased integration.

Hypothesis 3:

*Knowledge resources have strengthened with collaboration between institutions and researchers.*
As the secondary data shows along with the interviews with Sven and Eskil the region started out with several initiatives that are mostly gone today. Medicon Valley still exists and blossoms with over 400 companies and more institutions working in the cluster. Other Oresund Science Region initiatives stopped by the end of 2010 and none have come to replace those. Oresund University will be closed in August this year as no funding is provided after a change in legislation in Denmark. Still knowledge industries have strengthened on both sides of the strait. According to both Copenhagen Capacity and Skane officials the clusters appear to be largely independent of each other. Some respondents pointed out that increased proximity should lead to cooperation but no data or examples have been found to support that claim. The network needs to be further investigated and that will be done below. The main advantage for knowledge within the region is therefore in larger labour market and a more significant unit to sell abroad and attract investors.

The conclusion is therefore that the knowledge resources have strengthened but not because of the integration. The hypothesis is therefore rejected.

Hypothesis 4:

Cost of Capital has not improved due to the increased integration.

While the accessibility may possibly have improved, which should support the hypothesis, that would only be supported by common sense but not data. Ulf Anderson provided a more compelling argument that companies will look at the best capital allocation regardless of the bridge. The only thing that has therefore changed is that it is easier to cross the bridge should the best option be there.

There appears to be little if any change due to integration and the hypothesis is therefore supported.

Hypothesis 5:

Infrastructure has improved in regards to transportation and housing stock but not in payment.

Transportation:

As mentioned in explanations of the hypothesis in the methodology chapter the usage of the capacity was considered an improvement of infrastructure. The section on usage of
the bridge shows well that the capacity is always improving and this trend is believed to continue in the future. The improvements on infrastructure are on-going as there is for example discussion about a tunnel between Helsingor and Helsingborg along with improving infrastructure in Copenhagen as well as on the Sweden side.

The airport has increased the number of passengers as was explained in the chapter about air travel both by looking at actual numbers and in comparison with Stockholm. Ulf Andersson furthermore came up with explanation that the influence region has increased beyond its borders for example for people travelling out of Gothenburg. Better network also helps attract more passengers, which a gain calls for more locations so greater volume should further improve Kastrup as a hub.

The ports that were expecting a great decline became more active than ever and turned to cooperation instead of competition. As Filip Jinnestrand and Sven Junghagen pointed out they are in a process of building specialized facilities on both sides of the strait.

The capacity of the infrastructure is therefore better used and that part of the hypothesis therefore supported.

Housing stock:

As has been mentioned in hypothesis 1 there has been a flow of people from Denmark to Sweden to gain access to lower housing and living costs. The improved accessibility created by the bridge has constructed a stabilizing factor and as the section on housing market explains how economic factors are of high importance when people move across the strait. When the Danish economy was doing substantially better than the Swedish that drove both housing price up but also had an influence on the exchange rate as a cause the difference in prices was 35% on comparable assets. With the cooling down of the Danish economy and good economic experience Sweden in recent past the difference is a mere 5%, and the flow practically stopped.

The housing market has therefore improved with the Sweden side being able to stabilize the Danish side to some extent. The part of the hypothesis is therefore supported.

Payment:

No evidence was discovered to have improved the payment infrastructure. Surely some stores in Skane, particularly in Malmo, accept the currency from the other side but that
is considered to be a minimal aspect. Furthermore card usage has increased in a way that currency exchange is of little importance to consumers. On the business level companies should have little problems with different currencies.

It is still noted that having the same currency would increase the integration and take away the currency risk. Economic cycles would be more similar though possibly some of the incentives for Swedes going to Denmark would become smaller. This is still not part of this research and could possibly be a research topic in itself. Furthermore with recent events in Europe it is considered unlikely that Sweden joins the Euro, or that Denmark leaves their arrangement.

The integration has therefore not had a great effect on infrastructure of payment and the hypothesis is therefore supported.

As a conclusion it can be seen that the entire hypothesis has been supported.

**Home Demand:**

Hypothesis 6:

*Segments have gained options with the increased integration.*

While explanation of the hypothesis suggested that segments would mainly be at the margins (niche segments) that cannot be supported. Ulf Andersson points out that a bigger market should lead to better servicing in a wide sense while niche segments would become significant enough to be served. Still he points out that a competition could be created in some instances when a supplier that has served a segment on one side starts to serve the same segment on the other side. Filip Jinnestrand points out that customers can find products at better prices on different sides of the strait which citizens of both nations have taken advantage of. Many stores have set up huge outlets close to the bridge at the Swedish side to take advantage the people looking for bargains. The author of this report is furthermore familiar with seeing a number of Swedes in grocery stores with carts full of alcohol as it is more expensive on the other side. This is understood to be common and be a bargain especially if bought in bulk. While large numbers of Oresund inhabitants cross the bridge in search of products and bargains a much larger portion of the population is assumed not to do so. These individuals have the options to do so though it is not exercised.
The hypothesis is therefore supported. It has to be noted that while this benefits perhaps mostly niche segments the hypothesis is supported across the board.

Hypothesis 7:

*Sophistication and demanding of buyers has not increased as a cause of the increased integration.*

Filip Jinnestrand and Ulf Andersson both pointed out that increased options should increase sophistication of the customer. Still Ulf pointed out that on a business level, companies would seek out the best supplier regardless of location. The access would surely improve but if that supplier was chosen it would most likely because it was optimal but not because of the increased integration accessibility.

The data is therefore inconclusive and hypothesis neither supported nor rejected.

Hypothesis 8:

*Companies increasingly consider the entire region as their home market (geographic scope).*

Ulf Andersson provides an interesting insight as he points out that with the opening of the bridge the influence area of Oresund has increased at the expense of Stockholm. At some point there is a border where people rather go to Stockholm than to Oresund, this line presumably has moved north. Although this is not the part of the hypothesis it is part of the explanations provided. The market size has therefore increased more than its individual components (Skane and Zealand).

Evidence from Tendens Oresund point to that companies are set up across borders to serve the customer better and is therefore more aimed at the downstream activities in companies value chain. Ulf Andersson points out that the geographic scope differs greatly depending on the sector and the nature of the business. Businesses such as consultancies frequently set up offices in Stockholm, Oslo and Copenhagen to serve the entire Scandinavian market, for example Bain and company. The Copenhagen office is therefore intended to serve Denmark and southern Sweden rather than the Stockholm office. On the other hand the head office of a Sweden-wide company is more likely to be set up in Stockholm. Ulf believes that companies in Southern Sweden would just as well set up their offices in Copenhagen as in Stockholm if they decided to move.
The hypothesis is supported for some sectors but rejected for others. As a whole the hypothesis is therefore rejected but the information provided used to make conclusions.

**Related and supporting industries:**

Hypothesis 9:

*The value chain of companies is increasingly set up cross borders but within the region.*

Explanations provided with this hypothesis in the methodology chapter points out that the question has more to do with upstream activities as the former hypothesis talked about downstream and strategic orientation.

It is evident from the data that generally factors are cheaper in Sweden but data from Tendens Oresund points to that they have not been taken advantage of. Ulf Andersson provides some explanation for this saying the difference is possibly too small. That is to say that when differences in labour cost, currency along with increased transportation cost may not be great enough for the outsourcing and offshoring to pay off. Locations such as in the Baltics may offer a greater difference. The companies in Denmark may therefore rather take advantage by hiring Swedes, or Swedish companies, to do the job without actually outsourcing.

Ulf Anderson also points out that the resources, skills and knowledge on both sides of the straits are quite similar. There are however perceived significant pockets of knowledge that can be taken advantage of.

Therefore the hypothesis is rejected.

**Firm Strategy, Structure and Rivalry:**

Hypothesis 10:

*The increased integration has not affected national priorities.*

Porter suggests that regions don’t pick winners and create good environment for companies and industries to prosper in. Looking at the Oresund region it can be seen that all policies are directed at few industries, this is apparent from information on the websites and set ups of Örus, Oresund Committee, Copenhagen Capacity and Invest Skane. Combining the information provided by Filip Jinnestrand, Sven Junghagen and Peter Munkholm is can be seen that these institutes work under the grace of municipal governments and the politicians that govern them. The politicians have therefore
decided the focus of these institutions toward medical, biomedical and pharmaceutical industries to name a few. Also the industries are where the region tries to market itself. It is of course common that regions have institutions to attract investment and they try to market their “brand” and that brand needs a “brand identity”. The identity of Oresund is in line with where its specialties are according to parameters discussed in the subchapter “knowledge sector” in secondary data.

This can therefore be considered a criticism on Porter’s framework as it doesn’t assume that the region has a focus toward certain industries. It rather assumes that the ‘invisible hand’ guides the market. This will be discussed in the conclusions further.

As the national priorities appear to have changed the hypothesis is rejected.

Hypothesis 11:

*Competition has increased with increased integration.*

As mentioned the clusters have blossomed on either side of the strait but not integrated very well. The premise to assume that companies are competing was that companies had competitors on the other side this appears to be largely untrue. Hypothesis 6 assumes that consumers have gained more options and rejecting this would be in some contrast to that.

Still the no evidence could be found of increased competition in one way or the other and the hypothesis is therefore inconclusive.

Hypothesis 12:

*New venture creation has increased with increased integration.*

In the explanations with this hypothesis the problem of causality was discussed. Later information that about ventures that were founded in Sweden with Danish owners, and vice versa, was located and it showed that the number had increased substantially. It can therefore be seen that the integrations has increased number of new ventures.

Still the increase seems to be singularly in downstream activities and examples of cross border spin-offs or such could not be found.

The hypothesis is neither inconclusive.
Overview and discussion of the diamond

Below an overview of conclusions on the Diamond can be found. Each force is presented along with its hypothesis as per the methodology and in bullet points whether the force is supported or rejected. At the end of each force is a conclusion of how much each force has been affected. Subsequently the Diamond will be evaluated, with some conclusions along with identifying parts that need further explaining:

Factor Conditions:

- H1: The human resource pool has integrated with an effect on both quality and quantity.
  - The hypothesis is not supported as it stands. Still the labour market has strengthened and optimized.
  - The category has been strongly affected by human resources.

- H2: Physical resources remain unaffected by the increased integration.
  - Supported.
  - Hypothesis not used further.

- H3: Knowledge resources have strengthened with collaboration between institutions and researchers.
  - The conclusion is therefore that the knowledge resources have strengthened but not because of the integration. The hypothesis is therefore rejected.
  - Hypothesis used for further analysis to identify why it hasn’t strengthened.

- H4: Cost of Capital has not improved due to the increased integration.
  - Supported.
  - Hypothesis not used for further analysis.

- H5: Infrastructure has improved in regards to transportation and housing stock but not in payment.
  - Supported.
  - The category has been affected by human resources.

Factors have been affected by the integration. The biggest affects have been with the labour pool, transportation and the housing market. These were considered to be the most important hypothesis in the category along with the one about knowledge
resources (H3). Still the research has put a light on lack of networking within the area, therefore networks need to be further analysed. The cost of capital and payment along with change in physical resources were all expected to be rejected and therefore there is little surprise.

Home Demand:

- H6: Segments have gained options with the increased integration.
  - Supported.
  - Hypothesis used for to make conclusions about the category.

- H7: Sophistication and demanding of buyers has not increased as a cause of the increased integration.
  - Inconclusive
  - Not used for further analysis

- H 8: Companies increasingly consider the entire region as their home market (geographic scope).
  - The hypothesis is supported for some sectors but rejected for others. As a whole the hypothesis is therefore rejected.
  - Information used for further analysis.

A change in home demand is supported for the most part. The segments have gained options on a consumer market (business to business market is better covered in H9). The change in geographic scope of companies appears to be dependent largely on the industry and the business model. The influence area of Oresund has though surely changed and become better and the regions significance increased. The last hypothesis is therefore perhaps the most important as on a case by case basis companies may have increased the size of their market with the use of the bridge.

Related and supporting industries:

- H9: The value chain of companies is increasingly set up cross borders but within the region.
  - The hypothesis is inconclusive.
  - Hypothesis not used for further analysis as adequate answers have been given.
Related and supporting industries were believed to have strengthened as the bridge would open up suppliers and partners that previously had been unavailable but that does not appear to be the case. More consumers appear to be available but using different resources and capabilities in upstream activities such as R&D and production don’t appear to have materialized.

Firm Strategy, Structure and Rivalry:

- H10: The increased integration has not affected national priorities.
  - The hypothesis is rejected.
  - Hypothesis points to further analysis on regional identity and policy.
- H11: Competition has increased with increased integration.
  - The hypothesis is inconclusive.
  - Hypothesis not used for further analysis
- H12: New venture creation has increased with increased integration.
  - The hypothesis is inconclusive.
  - Hypothesis not used for further analysis

Firm Strategy, Structure and Rivalry have changed mainly as national priorities have been affected. The industries that have been chosen as focus areas are mostly in the limelight because of political will and would perhaps not be there without that support. Still this is considered a shortcoming of the framework as the region needs to be marketed to investors. It was to great surprise that the value chains haven’t integrated more especially with the greatest change having been to the factors of production. This shows to some extent a lack integration.

**Conclusion**

The research concludes that the *Factor* conditions have been affect to the largest extent while *Home Demand, Related and Supporting Industries* and *Firm Strategy, Structure and Rivalry* have been affected mildly. The hypothesis of Eskil Martensson that demand has caused the integration of the labour market is supported both by primary and secondary data. The integration was incentivised by demand for labour on one side and
financial benefits on the other. Furthermore unemployment and difficult employment legislation\textsuperscript{16} in Sweden gave a further push.

The initiatives for increased integration and combined clusters have not been successful and by the end of the summer in 2012 only Medicon Valley will be up and running. Despite having interviewed presumably all of the most important institutions in the region and several cluster initiatives were identified are in operation only the Medicon Valley is across borders.

The Diamond framework has provided sufficient information on integration on factors and the research has been support with the use of qualitative and quantitative data. While the research managed to identify that networking between Skane and Zealand is lacking the framework cannot explain the problem further. Theories were therefore identified to answer these questions. Furthermore as the framework has a national scope explaining the principal agent problem was unsuccessful, that will therefore be done in the following. Last the regional identity and how the area is sold to outward investors is considered in the following analysis.

**Additional analysis**

In this section the problems identified with the Diamond framework will be investigate further. First agency theory will look at the problems in decision making and differing interest. Then the networking will be analysed along with policy in two chapters about regional innovation systems and the triple helix. Finally the regional identity will be looked into and how connected clusters are in the region. Last the NRC model will conclude the analysis and give a holistic view.

**Agency Theory**

The Oresund cooperation is a complex relationship of principals and agents. The principals are of course political in nature and at the same times they are agents on behalf of their principals the voters. First players need to be identified on either side; one hand the principals which are two; the national and the municipal government and the agent Oresund governance. The double principal theory helps explain the interaction. The owners of the for example Oresund Committee are 18 municipal governments on each side (a total of 36). Possibly more stakeholders could be identified

\textsuperscript{16} Oral source: Sven Junghagen
but for the simplification only the two previously mentioned levels of government will be considered.

Stakeholder theory helps identify the relationship between the two; Skane for example contributes around 12% the national GDP of Sweden while Danish side of Oresund adds 48% of the national GDP. The dependency of Denmark on Copenhagen is therefore much larger than on the other side\(^\text{17}\). The increased importance of Oresund which several interviewees talked about can be understood as increased power and that the urgency to respond to the claims of the regions has increased. The problems of Oresund are of course not only a national matter but are also an international matter. Legitimacy as defined in theories still appears to be the same. The region as therefore come a more important stakeholder both in national and regional perspective.

Problems such as changing legislation can still become problematic. Using the model of Morovcsik and an example of Sweden creating legislation that benefits Skane at the expense of other provinces the government (agent) will betray its constituency (principal). As some variation in social influence between people and in this case provinces is expected and the interests of different groups need to be leveraged. The interdependence between different states is not a part of this thesis but serving Skane maybe of less importance in the big picture. That is the feeling of some Swedes for example Sven Junghagen. The relationship is shown in figure 21 where \(S\) stands for Stockholm.

Agency problem 1: National governments may have interests that are different from their municipal governments and the region.

\(^{17}\) From theoretical review: “Power which can be understood as the dependence of the other party. The dependence of party A on B is therefore B’s power.”
Another agency problem exists as the municipal governments have a common interest in solving problems of Oresund, for example to attract investment to the region. Still as the interview with Peter Munkholm showed they are competitors on another level to attract the investment to their part of the region. There are therefore interests of cooperation and competition between from the municipal governments within the Oresund going on at the same time. They compete with Stockholm both as a region but also as individual municipalities. The relationship can be seen in figure 22.

Agency problem 2: Municipal governments have common interest of promoting Oresund but have self-interest of getting the all benefits.
Two-way lines: Competition
One-way lines: Co-operations

It is therefore concluded that the region have different interests that may hinder cooperation. Increased integration could be a possible solution to the problem as having more common and more aligned interests gives a bigger incentive for cooperation. It is also concluded that national government may have an incentive not to help out with problem solving as they have other interests as the municipalities in question are only a portion of their constituency.

Sven Junghagen talked about his vision that the region would gain certain independence to make their own decisions which would solve some of the problems as the politicians would have simpler interests and interdependence between Skane and other parts would be decreased. With that some financial resources would have to follow to be able to solve problems.

Regarding the problem of taking away the competition apparent within the cooperation, the region would have to have more common benefits of placing facilities on either side. That is hardly possible unless the benefits would be shared and that is hard to see happen.
This chapter does not serve the purpose of solving Oresund’s agency problems but rather to point them out.

**Regional Innovation Systems – Networks and Policy**

Having looked at the agency problems of the Oresund region the regional innovation system will be considered. Cooke analysed at the regional innovation system of Massachusetts using five different parameters; region, innovation, network, learning and interaction. The Oresund region can be analysed using the same framework:

The *region* should be a unit that is between national and federal and might have some cultural homogeneity (Cooke, 2001). The former can be largely ignored as the model wasn’t constructed around cross border regions. The spirit of the theory still looks at a single unit of governance and that problem has been covered in the agency theory section. The cultural homogeneity is another requirement of a region and that is somewhat lacking in the case of Oresund. The national and local factors are believed to be stronger than the regional. The bridge has tried to promote something called ‘citizen Oresund’ but has not succeeded and is considered to be deemed to fail. As Sven Junghagen talks about Swedes are more embedded in regional “feeling” than their counterparts in the cooperation. Already the unit is a problem and considered weak.

The regions *innovative* firms have experienced great successes with impressive growth and local champions. The region ranks high in European and global comparison and innovation is considered strong. It is though very localized and not stretching across the strait.

As per the research *networks* are doing fine within their national borders but don’t appear to be crossing across the strait. All cross border cluster network initiatives apart from Medicon Valley have been cancelled and Coenen et al. (2003) even point out some problems there. Networks can either be naturally evolving or policy driven as discussed in the theoretical review and while the latter are non-existent the former are left to chance. As policy goes this is alarming, it is sad to see the initiatives largely fail and nothing replace them.

The same goes for *learning* as innovation; it is good at local level but poor on interregional level.
With the networking initiatives out of the way the interaction is limited. Conventions and other industry gatherings have been discontinued and therefore interacting is limited. Medicon Valley used seminars, conventions and meetings to connect players and the same could be suggested for other clusters.

According to the applied model it is questionable to call Oresund a single regional innovation system. The state of the networks is quite alarming and largely left to chance. If the politicians in charge of funding such programs have real ambition to further the region they need to be reignited at all levels. While it has not been within the scope of the project to analyse the failures of the networks some indications can be found in the interviews with particularly Sven Junghagen but also, Eskil Martensson and Sara Virkelyst. The autonomy and ambition of the networks appears to have lacked. New networks therefore need to have enough resources to accomplish what is intended.

Looking at the policy of both Invest in Skane and Copenhagen Capacity are involved in cluster development initiatives which is positive. The policy is therefore present at municipal (and also national) level just not at a regional platform. Looking at the model on policy that shows that external factors influence cluster policy in this case local and national policies appear to have stronger affect than the regional. Constructing a strong policy should therefore be done in a bigger context including external policies that affects firms and industries.

The definition of clusters talks about interconnected companies and institutions and it cannot be said that the clusters are crossing borders. Eskil Martensson talks about clusters not having been defined on a regional level while they are surely defined at a local level. This works need to be done and an overall policy defined about how to treat these clusters.

**The Triple Helix**

The Triple Helix looks at the relationship between academia, industry and state. To get the three to work together effective policies need to be established with intent to increase commercialization of knowledge for example strategic alliances between universities and firms. The helix appears to be working fairly well with local

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18 From theoretical review: “Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition.”
government having a clear policy in knowledge creating activities, science parks then provide a platform for knowledge to spin out of universities. More information was identified on the Swedish side were things appear largely positive and while Denmark has been criticised by OECD they largely appears to be doing fine. Connecting the two regions is more of a challenge. The stakeholders on different sides need incentives as a part of policy as such integration won’t happen on its own.

A report from the Medicon Valley (2005) emphasises the relationships between hospitals (state), universities (academia) and enterprises (industry). At the time of the report PhD programs were conducted across the strait and focused seminars, conferences and meetings the different members of the helix. The biggest networking event was then the Scandinavian Biotech Forum Science Conference with 10,000 guests in 2004 (Gestrelius & Oerum, 2005). The key ingredient according to Coenen, et al., (2003) is to increase relational proximities is trust which is a difficult and time consuming to create but most plans of Oresund appear to be long term. The experience of the Medicon Valley shows that cross border initiatives can work at least to some extent though the failure rate gives an indication that this is far by easy.

**Regional identity**

In the theoretical framework the work of Romanelli and Khasina the importance of the identity of a cluster is considered to give indications about what kind of investment will be attracted in the future. The inward investment agencies along with Oresund Committee and the Örus initiative have identified some focus areas. These areas are largely shared on all fronts and the economic reality appears quite similar. Denmark is stronger in pharmaceuticals while Sweden has more industrial and ICT companies but largely the difference is rather small. While the competing areas appear to have broader technological capabilities, Oresund does have its strongholds where it exceeds.
Table 2 shows the focus of the two inward investment agencies along with focuses derived from the ÖRUS strategy. As can be see the interests share many similarities. The first four can be considered knowledge industries and connect to some extent though ICT may be a little bit less related than the others. Porter talks about how he IT and computer related industries are connected to industries across the board (1998). This would strengthen one of the arms of the diamond namely the ‘related and supporting industries’ and Porter himself connects the food industry (dairy) with life sciences (pharmaceuticals) (Porter, 1998, p. 105). ICT still provides other companies with suppliers of top quality which should strengthen the whole region as a technological factor. The clusters are therefore quite related as they would require similar inputs and suppliers and knowledge can be created and shared between them.

Looking at the interviews and the data on how technological focus is divided it can be seen that the first four categories in table 2 take up a lot of the attention of the clusters. While no research was made about the size of each sector and calculating strength of clusters would be an interesting research project in itself judging by the respondents these industries appear largely dominant within the region. Figure 23 was therefore constructed based on the theories on regional identity and the perception along with reality of the region, the integration within the region is not considered in this picture but the region as a whole. Previous discussion has shown the lack of integration but for the purpose of this analysis it is assumed that the region is united.

<table>
<thead>
<tr>
<th>Focus area</th>
<th>Copenhagen Capacity</th>
<th>Invest in Skane</th>
<th>ÖRUS</th>
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<tr>
<td>Life sciences19</td>
<td>X</td>
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<tr>
<td>CleanTech</td>
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<td>Film &amp; Entertainment</td>
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<td>Tourism</td>
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</table>

Table 2 - Focus areas of institutions - Source: Author

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19 By lifescience biomedic industries are included and industries as per the following definition provided by [www.thefreedictionary.com](http://www.thefreedictionary.com): Any of several branches of science, such as biology, medicine, anthropology, or ecology, that deal with living organisms and their organization, life processes, and relationships to each other and their environment. Also called bioscience.
Looking at Oresund with the help of brand theories it can be said that though the brand image\textsuperscript{20} of the region has a good image that is mostly in line what the stakeholders want it to be. On the other hand the brand awareness\textsuperscript{21} of Oresund is rather poor or as Eskil Martensson says:

\begin{quote}
I think it outside, if we are lucky they know what Scandinavia maybe Copenhagen and maybe Stockholm but the Oresund region I think they have never heard about. So that is a problem of branding that Oresund region is new. I think in one term they think it is very interesting that we are a cross border region […]
\end{quote}

This is also a problem of dividing interest as a single principal would use the strongest brand to market the whole region. Guatemalan coffee farmers for example brand all

\textsuperscript{20} Brand image is defined as: the perceptions about a as reflected by the brand associations held in the consumers memory. This includes attributes, benefit and brand attitudes. The brand can be measured by strength, favourability, type and uniqueness of the brand association. (Kellar, 1993)

\textsuperscript{21} Brand awareness is defined as: the strength of the brand node or trace in memory as reflected by consumers ability to identify the brand under different conditions.
their coffee as being from the city of Antigua though it comes from another region. Branding the whole region as Copenhagen on the other hand would not be well received.

The regional identity is therefore relatively clear according to the respondents there appears to be little confusion as to what Oresund’s image but the region isn’t known which may be problematic. According to theory current situation should give indications about where the region is heading. The direction appears to be very clear and stakeholders are all rowing in same or similar directions.

**The NRC model**

To conclude the analysis the NRC framework will be used to discuss forces at play in the region. As mentioned the framework is divided into two so called concepts\(^22\); *current conditions* and *current performance*. Therefore each will be discussed separately and then a conclusion made by looking that the concept. The framework will be applied with the perspective of how the region has strengthened as a cause of integration.

**Factors**

The construct is divided into three sub constructs; *human resources* with the weight of 0,5, *transportation* with 0,2 and *business climate* with 0,3. Looking at the first sub-construct the access to qualified personnel has increased as well as the local sources of personnel. The human resources have therefore strengthened greatly. The human resource pool has though been increased in size but the two regions don’t appear to have supplemented each other in a Ricardian sense\(^23\) as the economies were largely similar. The same goes for transportation where the quality of both local and distant transportation has increased. The business climate on the other hand has not improved as much, the quality of life is high in both regions and to some extent the integration has increased but just to a limited extent. Relative costs have also decreased as particularly Danes have the option to cross the bridge in search of a bargain. Regulations and barriers are still a problem as the different legislations were the most common hindrance that specialists mentioned.

\(^22\) The model is first two concepts, then each of them have three constructs, below them are sub-construct that are assigned weights and last are indicators which get a numerical value which is then calculated upwards to find strengths and weaknesses.

\(^23\) Refers to David Ricardo the author of Comparative Advantage where one would specialize in a product and the other in another, the two would then trade.
All together the factors have been improved greatly with increased integration and the construction of the bridge. The business climate is least affected by the integration while the other two sub constructs have probably changed to a larger extent than any other in the whole framework.

**Supporting Organizations**

The construct is divided into innovation support with the weight of 0.25, community support of 0.25 and suppliers 0.5. The innovation support appears to have increased greatly as a part of national, regional and local agenda, it is still determined that this is not caused by the integration and would happen regardless of it. Community support has though happened more on a regional level as policies, programs and champions have been created as a cause of the integration. The ESS program is believed to out of reach without the integration though that is also related to significance which is a separate sub-construct. Suppliers have been changed to a limited extent as companies that are trying to get closer to their customers are benefitting from integration but activities in R&D and production don’t appear to have been largely influenced by it.

The supporting organizations have mostly been influenced through support of the community. The construct has therefore only been influenced to a limited extent.

**Competitive Environment**

The construct is divided into local activity with the weight of 0.2 and firm capabilities with 0.8. The former deals with the distance to most important competitors and suppliers which has probably not changed that much as it is assumed that the chance of the biggest competitor is situated on the other side of the strait is rather small. Furthermore the distance is perceptive and export economies like Sweden and Denmark must have realized opportunities without the help of the bridge as Ulf Andersson talked about. The latter, firm capabilities, deals with business and product development capabilities, for that to have changed the region would need to have connected more as the perspective is how the region has strengthen with increased integration.

The competitive environment is therefore largely unaffected by the integration.
Current conditions
To conclude the changes in the environment have been mostly in the form of increased strength of factors such as labour pool and infrastructure. The lack of connectivity across the strait has been discussed greatly in the thesis and changes to *supporting organizations* and *competitive environment* more influenced by local or national changes than at regional level.

Significance
*Critical mass* contributes half of the weight to the construct while *responsibility* has 0,15 and *reach* 0,25 which refers to *export orientation*. The latter two have changed mildly; one of the hypotheses talked about the scope and structure of the firms (*reach*) and that has changed on a case by case basis while the *responsibilities* haven’t. Both nations are export oriented and that hasn’t been changed by the bridge. The *critical mass* on the other hand has been increased and there are several examples of that being used. The area has become more feasible to external investors as it has more mass and potential. The ESS project has been discussed as well as the ports which have been able to specialize further as a cause of this increased mass and cooperation. The problem is as mentioned to connect the two masses in more than just a number on a paper.

The significance has therefore increased substantially especially toward external investors. Different companies and see the area stronger united than as separate units and the market potential is greater. Furthermore international rankings will put the region higher combined than singularly as discussed.

Interaction
The construct is built gives even weight to *identify* and *linkages*. The former looks ate *internal awareness* and *external recognition* with a more weight to the latter. *The internal awareness* appears to be very local (as opposed to regional) and doesn’t stretch across borders. On the other hand the external recognition appears to be in line with the regional identity which is positive. The lack of *linkages* has been discussed in enough detail to say that they are disappointingly few.

Dynamism
The last construct is split into *innovation* with the weight of 0,35 and *growth* with 0,65. Both sub constructs have been highly influenced at local and national level but not at the regional one.
Current Performance

The greatest contribution in current performances has been that the significance has increased. Companies see more potential in the area and there is surely bigger market potential. The same problem is apparent in the other two sub constructs as the networking is minimal to say that integration has positively influenced the region.
Findings

The findings of this research are in many ways simple. The integration has been very successful when it comes to labour market particularly but also in retail and real estate. This integration has been driven by different economic cycles that have incentivised people to look beyond their respective nation states. This can be seen by looking at commuters, number of people moving their domicile across the strait and so on. The forces of the market have driven this integration.

Still other factors remain unchanged; intentions to create an integrated common market appear to have failed. The interconnectivity appears to be largely limited within national borders and doesn’t stretch between sides. Sara Virkelyst asked why the goal would be total integration and that is a good question. The findings of Marshall in the 19th century talk about spill-overs, which increase with agglomeration that is to say knowledge creation increases by getting people together. The increased proximity isn’t enough, as the individuals need to interact for benefits to translate into results. With cross border initiatives all but gone the decision makers on a regional level need to make an ambitious framework for the integration to succeed. The cross border clusters need to be defined and a strong policy created to achieve the desired results. That is done by introducing initiatives that learn from successes and failures of the previous ones and by setting goals for the clusters, which are then monitored and revisited. The NRC model provided helpful for this research and is therefore recommended.

On the other hand the increased significance of the region has had some positive consequences especially when looking at the region from an external perspective. The area climbs the rankings and its market potential improves.

Therefore the full advantages of integration are far from reached and further potential to improve the region is substantial. Four of the six constructs in the NRC model for example have great potential for improvements. With a strong will at political, academic and company level these goals are believed to be reachable but resources and capabilities need to be provided for the next push.

Initially a research question was proposed and while the above analysis and findings are believed to have answered it the following will give a short overview. Of course the additional research questions will be answered as well.
Where are the major shortcomings of the integration?

The major shortcomings are in networking. Most of the initiatives have failed and none have replaced them. Great benefits could come to light with more interaction and four of the six constructs of the NRC model strengthened greatly. Policy makers need to give a push in this direction learning from past experience and giving resources to new initiatives.

Why has the integration either failed or succeeded in those areas?

The successes have been made as the laws of the markets have given incentives to individuals and company a chance to exploit opportunities such as higher salaries. Still barriers exist and need to be removed in cooperation with local, national and regional legislators and decision makers. In areas where market hasn’t incentivized integration it has failed and policy makers need to help the integration using initiatives and incentives.

Is there a principal-agent problem in the Oresund cooperation?

The short answer is ‘yes there is’. The analysis showed that two kinds of agency problems exist. First that dependency on municipal and particularly national government decreases the chance of successful change as the interests aren’t always aligned with national government for example in a need to leverage the interest of different regions and the nation as a whole. The second has to do with different interest of municipalities as they have an interest to promote the region and cooperate but also to compete. The interests are therefore aligned to some extent but not the whole way.

Are there networking problems that can be identified?

The short answer again is ‘yes there is’. The networking problems have been analysed to some detail in the respective chapter. The lack of networks and as a cause interaction between players is a problem. Initiatives have as mentioned largely failed and need to be helped to succeed. Some steps have been provided in previous discussion
The overall research question stands on the shoulders of the sub questions as they provide information that helps answer the primary one.

*How has the Oresund region strengthened with increased integration?*

As shown in the concluding NCR model, the factors have benefitted greatly from the integration. That is labour market, transportation, housing market and to some extent the general business environment. Furthermore the increased significance of the region has made it a more feasible region for business to set up in. This is due to both a bigger critical mass and improved international comparison. The shortcomings have been discussed in the sub questions that provided direction to identify problem and in some cases solutions.
Concluding Remarks

From the beginning the purpose of this research has been to analyse the Oresund region and its clusters. Initially a research question was constructed to guide the projected, with it relevant theories were identified and methodology constructed. The initial framework was the Diamond model by Michael Porter which has been used to analyse countries and regions with success. In the case of analysing increased integration the model proved to be unsuccessful, it was therefore used to give the research a direction. From the gathered information the research turned into an unexpected direction which was beyond the scope of the Diamond. Networking and policy theories appear to be lacking in the Diamond model and other theories were therefore introduced. The NRC model then provided the overview necessary as it takes networking and policy into account to a greater extent than the Diamond.

Limitations and future research

While the research analyses the region at a very wide level a more detailed investigation utilizing micro level theories would just as well be of interest. The research can still give important information particularly to policy makers. Academia can on the other hand use it to pinpoint interesting topics with a narrower scope. The networking aspect can be analysed, for example, by looking into at the learning that can be made from past initiatives. A research could perhaps be in a form of a case study or to give indication of how a successful network would be constructed. This research looked at the entire region with its clusters without concentrating on one particular industry. Future research could perhaps analyse a single cluster or a few interrelated clusters. On a different note the regional identity is an interesting field of research looking at the difference between perception and reality along with mapping the clusters and their relativeness.
Bibliography


Öresundsbro Konsortiet. (2010). *We wouldn’t have existed. 10 Years - The Öresund bridge and its region*. Öresund: Öresundsbrokonsortiet.


Ricardo, D. (1911). The Principles Of Political Economy And Taxation. London: N/A. a copy from google books used


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Appendix

Appendix 01
Total time : 59 minutes and 21 second
Time of Day: 10:00
Place: Office of the Oresund committee
Interviewer: Ingi Úlfar Helgason
Interviewee: Filip Jinnestrand

Prior to starting the interview the Thesi wass and how it came about along with other details.

What are the differences between the labor pool of Malmo and Copenhagen?

Of course there are differences, but you have to be more specific as to what differences there are. We generally have a high level of education of both sides. If you see the majority of people crossing the bridge obviously from Sweden to Denmark. Most of them are young people. So and that is fairly uneducated Swedes coming to work in Copenhagen, in service business. But there are of course Danes that have good jobs in Denmark, who work in Denmark but live in Sweden. So there are a lot of differences of course but you have to be more specific.

Yes of course. If you are talking about Malmo it has been going through major transformation in the 90’s when they opened their own university and has it has been generally known as a labour city with the ship building city but lately it has become more a knowledge city in that sense. That can also have to do that the market has widened I mean if people with high skills or high academic levels they may have found it difficult to find jobs in Malmo before because it was an industrial city with the bridge opening they have access they have more access to a bigger labour market, still live in Malmo but still find high profile job in Oresund but still it is also part of integration issue but also part of Malmo transforming itself. Because there has been a lot of change in Malmo both as a cause of the building of the bridge because people can still live in Malmo and work in Denmark and Danes live in Malmo and work in Denmark.

Malmo University is working; they have the teacher education for instance, they work with... not so much technological issues, that is more Lund. But yeah… I know the teacher education is there, a lots of human rights, peace and conflict study, innovation rights and so on. I guess you can go into Malmo hojskole and look at their web page and see what their ambitions are and what they’re focusing on.
Is there any special way that Malmo has supplemented the labour pool of Copenhagen?

You mean by… Yeah like said there are a lot of young people are working the Copenhagen area from Malmo. So I think that in a sense that has benefitted the Danish side because they have a lot of good Swedish workers. And Sweden people are good to be known comparison… but Danish employers like to employ Swedish young people because they are ambitious, they show up on time and they work hard and so. So they in that sense they have gained access to new market that is accessible thanks to the bridge.

So this evens out the fluctuations in the Copenhagen economy?

Well, perhaps. First of all this leaves taxes as people who live in Denmark pay taxes in Denmark. So that I think in 2010 they left 6,6 billion Danish Kronur to the Danish economy and that is of course positive. I work in Copenhagen but I live in Malmo but I pay taxes in Denmark. That is ofcourse beneficial.

Let me ask you about that, I have read portions of the OECD report from 2003 about Öresund. There some solutions were suggested such paying portions… are you paying your entire tax in Demark or does Malmo get something?

There is some agreement that some of the money is perhaps some of the money is transferred to the Swedish side. I think you should talk to someone else about that because there is of course a tax agreement between Denmark and Sweden. The exact details I’m not sure about. I believe some of the tax goes back the majority stays and is paid in Demark. So the Danish economy benefits from this system a lot.

Story about using the system and not paying for it… and tax.

If you interested in that you can look at the agreement between the two countries.

The definition for physical resources read.

Do you think any of these have changed with the bridge?

Of course there are a number of cross border co-operations that have occurred even in the private sector. We have the ports for instance. A cooperation between Malmo and Denmark, that is very interesting and you can find…

Yes I have read about it…
There you have. We here of course believe that the integration is positive for the economy of both sides. Individually we are not strong enough actors to attract investment or compete on a global scale. So what we need to do is cooperate. Because we have massive resources, we have 3.7 million citizens and we have a quarter of a million companies in the region and so on. We have a lot of the resources but we need more to maintain our competitiveness and we need to collaborate and the ports are a brilliant example of what we do. We can have one port in Denmark and one in Sweden and they will compete and that is not positive for any site so the cooperation they become bigger.

**Reading through your organization’s website it wasn’t very clear but did this organization take part in this or did the ports do it on their own?**

Well we are working, to get the business to meet. The politicians and the businesses to meet. So we are working both toward the politicians but also the private sector to get them to see the benefits of cooperation. This last week we had “growth days” in Malmo, where Swedish politicians and businesses meet and discuss the future and of course politics are mixed together (hand expression). There are connections of course, to create a platform for cooperation that is main area, that’s what we need to do. I can’t tell you in detail how much we influenced the decision for these to parties but we are working in that sense to create a platform both for private and political interest to gain more through integration than competition. That’s our main objective pretty much.

**The knowledge resources – I assume you are working to get knowledge institutes. Can you tell me how the knowledge resources have strengthened? With institutions, researchers, private companies?**

I can take an example with the ESS the European Spallation Source, are you familiar with that? (answer no). It is a neutron cannon that you know physics, they measure atoms. They are just started to build this facility. And this is also a great example of cross border cooperation. Lund has the technological university, so they are building it in Lund and they have the analysis lab in Copenhagen so the fact that we got the project in Sweden is because we have the capital city, Copenhagen, we have Lund, we have Malmo two knowledge based cities and Copenhagen of course has the Danish university physics (said psychology). You have Kastrup a major international hub, Copenhagen airport, and from the Copenhagen airport you can take the train half an
hour- twenty minutes you are in Lund. So then you are at the exact site. So it is a collaboration and if Lund alone would’ve like to get this, they probably wouldn’t have gotten it but the fact that they are collaborating make it possible.

**Did these parties get the project individually, or with the help of this organization, or a combination of both?**

I can’t tell you the exact details of how involved this organization was, but that is how we work to get the private sectors to meet. And so, but that is a good example of how we want it to be, we should have more cross border cooperation. Of course we have, what is it, 12 universities, 165.000 students, 12.000 researchers I think. So it is a big resource, a big knowledge region. And together we can use this to attract these big investors, and some of these big facilities. So it is a good example to show.

**This region is very interesting in many aspects but one thing is that it doesn’t have a parent or it doesn’t have one parent. How is the governance of Öresund, are there problems or….**

That is a major issue, like you say we don’t have managing authority sort of speak. We cross border politics or the integration issue is shared by two countries. So what we do we work on a regional level because we are collaboration between 18 Danish, local or regional politicians and 18 Swedish. So we are the secretariat of these meetings. This is on a regional level and in order to change things or to we of course need the national level on board for our agenda. We need to get the national decision makers to realize the importance of integration. That is challenging in many cases so that is how we work. We are a regional organization and we can make decisions on how we want to integrate or how we want to develop but we need in many cases an involvement of national level. Because, the laws etc. so we need them to be on our site of course and that is a challenge in many ways. Most times it works but sometimes it is more difficult depending on the issues. On education we are talking about the issue of education we are talking about the Öresund University. Which is as you probably know it is going to be cancelled. (question why is that?). Well it was a decision that was taken last summer or last autumn that Swedish students or Non-Danish students, students that are not living in Denmark, come to Denmark and study one course, they have to pay a fee. And of course in Lund university they have some programs where you read three or five years in Denmark [probably meant Sweden] and then out of these three or five years
you have one or two semesters in the Danish universities. And the Danish universities said “hey this is costing us money” because in the end the Swedish universities gets all the funds from the Swedish state but they send out their students to other countries that have to pay for the education. So it was on a national level in Denmark they took the decision that the Swedish have to pay. For this one course or the universities have to pay for this one course in Denmark. So that is the major reason for why the program was cancelled. And of course that is a shame it is a matter of resources of course but they should be able to cooperate. There are of course many more Swedish students that go to Denmark than the other way around so I guess the Danish universities feel that they are bit misused sort of speak. But that is where we are right now and they say that they are going to cancel the cooperation, but we’ll see what happens. These is a lot of debate going on about this issue right now, so we’ll see what will happen.

The networking aspect of it, do you think they will find some solution to that?

The Öresund University is of course just one network. Which is of course good and big as there are very many universities but still there are cross border co-operations and this ESS is just one of the example where we have private industry and the local authorities and the universities collaborating and of course you have an exchange of students and researchers that are coming to use facilities, so that is most definitely a good network. Also within the medical business we have a co-operation called Medicon Valley which is also a good resource exchange so there are definitely others.

Has the cost of capital and the capital instruments changed because of the integration?

Please be more specific.

Has the cost or the interest rate of people are getting lower, are for example Swedish companies coming across the strait to get capital?

Yes, there is definitely been an increase in establishment of businesses across the strait. I mean before the bridge, especially smaller businesses if they were registered in Skane that’s their market and the same in Denmark, that’s their market. And with the bridge we have seen some tendencies [yes there are 700 companies now when there were 200 before]. Yes something like that so there has definitely been some increase not of workers commuting but also businesses establishes across the strait.
This question was to be later but I’ll ask it now. I saw on tendens Öresund that they say that this [companies being established across the strait] is to be closer to the customer, so these are more services like opening an office closer to your customer. On the hand, in the upstream of the value chain, are companies moving parts of their value chain, maybe production facility to Sweden is that something you see is it more to get to the customer?

I really can’t tell whether this has increased? I mean if a company opens up a facility on the other side of the strait is it because they want to be closer to the customer, is it because it is cheaper to have the production on the other side? I don’t know [It is really good to get an “I don’t know”]. I can’t tell.

**There is one problem with the countries not sharing a currency, is that a problem...?**

Yeah, in some respect of course. I guess a lot of workers they find it more interesting, the workers living in Sweden, to move Denmark because the Krona is valued higher in Denmark than in Sweden and a sthese change of course at one point you could get 1,5 SEK for 1 DKK and it is very beneficial to work in Denmark and now it is down to 1,2 SEK. So it cannot work advantage… depending on the market of course and [where you are standing in it]. Of course that should also influence companies. If the Swedish krona is valued higher it of course will be more difficult for Swedish companies to export goods and services.

**I saw that the Mayor of Malmo wants to go into the Euro to share a currency? Is that the general feeling in Skane?**

Well I think you will find it very, very difficult for Swedes to enter the Euro right now with everything that is happening in Europe. I think that there is a, without having anything [your feeling]. Yes my feeling exactly that there is not so much support for the Euro right now and I believe that is pretty natural.

**I ask a little differently. Do you believe there is more support for the Euro in Skane than in other parts of Sweden?**

That I really can’t tell. It is very difficult. You can’t really talk about a regional issue you have to put that in other categories. Level of education or I think you can find better variable for the support for the Euro than where they live.
What I am thinking is that it would be to some extent beneficial to the region to have a common currency, so if that is the feeling that the people of Skane are having more than others as it matters less for Stockholm or Gothenburg.

Well of course it would be beneficial to have a common currency definitely but then again if that would mean that we have to join the Euro… And of course this is a national issue and what I know is that we [the Öresund committee] haven’t taken sides as an organization as far as I’m concerned to promote the Euro. But I can look into our position on that.

I am also looking at health care as the integration been stronger there?

Well there is a lot of difficulties in regards to health care. As I am employed in health care as I [for example] am employed in Denmark I pay my social insurance tax in Denmark so once I get sick the Danish system should support me. There have been a lot of issues regarding this. I mean if, now I’m commuting only 30 minutes by train, if I’m living in east Skane and I get injured and I’m entitled to rehabilitation for instance then the Danish system says I should be rehabilitated in Denmark and I get two hours commuting it will be very problematic to get rehabilitation and get back. That is one of the problems we are working on, as the Danish system does not allow extraction of rehabilitation and they should according to EU law and Nordic agreements. Danish should allow a Swedish person to be rehabilitated in Sweden this is one of the issues we are pushing, that they should change at a national level. It is a problem as this causes issues of course.

Are there any programs going on about specialization and transferring patients?

Look into, I think it was this autumn. A hospital in Malmo and Copenhagen started an exchange that if there is a longer queue on the Swedish side that you can go to the hospital in Denmark and other way around. So look into that as that is very interesting. They are pooling their resources in a sense between these two hospitals so look into that.

[small talk]

Are the customers or the segments being better served as a cause the integration?

The customers?
Just the general customers. Do they have more options than before?

Yes without a doubt. We have loads of Danes going to the Swedish side to do their shopping and also in terms of event going to. We had the co-operation with handball, both personal shopping and also event, culture. With the bridge you get access to a large variety of entertainment, basically. And that is we have just now decided on a common strategy which is quite interesting it is actors on both sides of the strait that are engaged in the events sector, it can be sports it can be culture it can be shopping anything. They have been gathered to increase [...] cooperation across borders. I think it has never been done before. I can send you some information about it because that is very interesting… that wouldn’t have been possible without the bridge.

Anticipatory buyer needs are sometime you have customers that can sort of tell the future. What they are requesting later becomes what is going on globally? Some customers are in that way better to have than others? Do you believe the customers of Öresund are good anticipatory customers as a cause of the integration?

Don’t know but still having access to a bigger market they of course get more selective. I mean before you could only do your shopping in certain areas and you would have to take a ferry to go to shops you haven’t been to before. I mean in both Denmark and Sweden are big on design issues, both in clothes, furniture, and jewelry and so on. So I guess just the shere access should create a more demanding customer. If you are sitting in malmo and you don’t like them there [you can hop on a train] yes exactly and 30 minutes later you are in Copenhagen and you find exactly what you want. Or the other way around. So of course a bigger market should of course create a more demanding customer.

What Porter’s theory says is that national priorities… it happens that sometime it happens that some sectors that become more important. [...] either something that the government does or something that the public wants. Is that something that the governments of Sweden and Denmark want and prioritize some sectors. What I have seen that are perhaps some evidence of this is e.g. the Medicon Valley, medical, biochemical, cleantech [and so on] it is very much moving in this direction. So is that something?

So you are thinking about national level interference in these sectors.
Yes not maybe, well in this case these are regional champions. The institutes are really working [towards that] and are they picking the winners?

I believe, there are of course focus areas and we want of course green growth, cleantech, knowledge based all those. These are of course certain areas that we want, we see that we have first of all the resources, we have the knowledge both in terms of universities and companies that work within these sectors. So of course we want them to co-operate to get bigger as with the Medicon Valley as an example. I don’t know if you have read Örhus our regional development strategy. [I haven’t actually but I have seen it]. You should look into that because there we have, I mean the politicians on both sides have realized the main common objections and this is of course structured around green growth environment so that everything that we do should be within these areas. But you should look into that in more detail.

But when you say you are focusing on these areas are deliberately ignoring other areas or..?

I wouldn’t say that of course but…

But it is just less focus?

I guess that from a political perspective you have to see what resources we have and you see where we need to be developed. We are integration needs a little bit of a boost and we want to market ourselves as a… as a future oriented region where work with the environment and the green tech technology and so on and that is an organization we want to be. Of course we push these issues, not deliberately neglecting other issues of course but that is the politicians they want the region to be marketed in that way.

Where would you see the region go in the future?

Of course we are coming from a difficult economic times, just before a major decline. That the high level of commuters and integration was going very, very good, as it gets worse the integration has declined slightly or at least slowed. If you are just talking about the infrastructure; they are going to build a tunnel between southern Zealand and Germany; the Fahrman Belt. That is going to increase the traffic through this region. This region is actually the hub connecting the Nordic region, and Russia to some extent to the continent. So we see an increased flow of goods, people and everything in the pipeline we see a connection between the cities of Helsingör and Helsingborg. We are
talking about building a railway tunnel and car tunnel. Which is something we are pushing as well. We needs these kinds of investment to increase integration of course. And we see that with the increase of the general traffic we are going to need these investments in other case the Oresund bridge will be jammed a bottle neck in a sense. And of course this attracts other things. I think we are in an interesting period as some people say we are coming out of this depression and some we don’t. We need to take an advantage of the fact that we can actually work together. In that sense – what the future brings is a difficult question of course.

You are in a kind of process of integrating so the final goal isn’t clear if possible at all?

Just working with. Now a big issue that the people working in Denmark and living in Sweden are not allowed to have an extra job in Sweden. Because you belong to Danish system as a worker and the Danish law but if I had an extra job in Sweden I would belong to the Swedish laws that are different form the Danish. That would make my employer in Denmark adjust to the Swedish laws. For instance it will force them to pay, what is it, 25% extra. In that sense I am forced to in my contract and a lot of Swedes are forced in their contract that they are not going to apply for a job in Sweden because that would mean that the Swedish citizens would have to pay their payroll tax in Denmark. That is one issue that we are on the way to solving right now from an EU legislation. Which is very positive because then I can work 25% in Sweden and still belong to the Danish system. These things are happening and are working with…

I was going to ask you about the challenges. One of the challenges is different legal environment?

That is a major challenge. The laws, national laws are different. So that is one of the big issues we are working with we are trying to harmonize the legislation. There is a suggestion in the parliament [Danish] that all laws that are being adopted will be examined through the cross border perspective so that we are not creating further a cross borders. But this also applies to EU legislation for instance. When they are implementing when legislation are transformed into national legislation they need to be considered in a cross border problem. A law may look very good from a national perspective but when you bring in the cross border perspective it might create further [and] new problems and that’s we are keeping a constant debate and constant
information to the national decision makers that “this law you are creating right now it will create those and those difficulties for 25,000 people that are crossing the border each day. So that is a major challenge and in terms of spreading information, just in health care and social rights are different on different sides of the border, in Denmark and Sweden. So when I apply for a job in Denmark I need to know what conditions apply in Denmark and I’m from Sweden and other way around. There is a big lack of information flow and Öresund direct is crucial we have this organization to supply information both to citizens but also to companies and private sector, they need to know what resources, what taxes, what conditions they are under when they are trying to expand their business to the other side of the strait. So that is also a challenge, we have the national legislation, information challenge and also a big challenge that it is calculated we are going to lack a lot of people on the labor market. Denmark people are getting older, faster and we are not filling up with young people, both in Sweden and in Denmark but particularly in Denmark. So in a few years there will be a lack of young workers of course. If we do not solve these cross border problems and create a common market, that will actually solve the issue of lack of workers because then the Danish side can take Swedish workers to fill up the gaps sort of speak. So that is also a big challenge we need to look at this from a thirty year perspective. Unless we are going to be less people doing more because we got so many older people in this region. The laws are major challenges that are being looked at.

Are there any other challenges that you can think of?

Well, I think you need to be more specific.

Well it is supposed to be an open question?

Well like I said another problem in terms of infrastructure that we are going to face in the coming possibility is that the bridge will be clammed and that it will become a bottleneck.

I read in Tendens Öresund that the problem is not really bridge but the Copenhagen infrastructure and the Malmo infrastructure. Not the bridge itself.

Well according to another analysis that was made. You can get that aswell it […] in risk of being the capacity is being full and specially with future development with the Fahrman belt it will create bigger problems for the bridge. But like you say there are a
lot of infrastructure investment that needs to be done, especially, well in Sweden but in Denmark as well. From the main road going from the west of Copenhagen going up to Helsingör. And if they are going to build a tunnel between Helsingör to Helsingborg it is going to an increase investment in the infrastructure in the mainland as well. It is not just a matter of building the connection it is also about making the rest of the infrastructure of course. An also the future the trans Europe high speed train how are we going to adapt to that, we need to be connected, Stockholm, Oslo, Gothenborg need to be connected to this network. And the traffic is naturally going to flow through this region. So how do we stand to that are we prepared for this. So these are challenges of infrastructure perspective.

What else can we think of. And of course we have a major resource the knowledge in the region both in terms of high level of students, researchers, universities for them to collaborate to get the investments like the ESS. It is very important that we have this collaboration, so that is a challenge right like with the challenge Öresund University has met. And to regain some trust, high level cooperation.

[...]

Integration doesn’t only benefit the region but also the entire nation state of Sweden and Denmark. We have such a high level, we have so many people living here. It is such an important region, if this is not a developing region, which is creating growth it has a negative effect on a national level. So that is how we see and the politicians see. It is nationally beneficial, but I wouldn’t say we are competing of course

You are perhaps cooperating and competing at the same time?

Yeah of course, we need to do that, definitely. To attract investment, first of all with the bridge and to build a second connection. If we need on the national level to invest in this region, the potential that is in this region, that we work on.

Interview ends.

Words removed for Word Cloud:

Of Course
So
And
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Need
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Sense
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Changes done in the program:
Rounder edges
Mostly vertical
Max words:30
Milk paints
Some variation

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Some word have been changed to increase flow or due to poor quality of audio assumed by context. Furthermore some discussion that is not relevant to the subject, like small talk was taken out. These changes are though minimal and do not change the big picture.

The audio file can be provided upon request.

Appendix 02

Total time : 1 hour 6 minutes and 45 seconds
Time of Day: 15:30
Place: Copenhagen Business School, Kilen Ulf Andersson’s Office
Interviewer: Ingi Úlfar Helgason
Interviewee: Ulf Andersson

[small talk]
The research explained along with why the respondents answers are important.
Though Ulf is Swedish he does not reside in the Oresund area except when on work at CBS. He lives in middle of Sweden.
Ulf explains that he doesn’t have much experience on clusters or the region.
Ulf recommends talking to another professor at CBS Christian Geisler Asmundssen who has been writing about Porter’s Diamond.
Ulf is recommended that if he doesn’t know the answer then rather say that than go on about something he is unsure of.
Interview formally starts

**Do you know anything about the human resource pools of Malmo and Copenhagen? How they were before and how they have changed and how they supplement each other?**

Not really, I don’t think they have changed very much in the terms of HR pools. I think the pools are pretty much the same but the possibility of utilizing the pool on both sides of the straits are of course different. I mean there are a lot of Danes in living in Sweden, there are a lot of Swedes living in Denmark. And there is a lot of people commuting for work, so the utilizing of the resource pools has changed.

**So they are supplementing more than...**

I think they are supplementing but it depends on what you mean by supplementing.

**What I figure was that Malmo, I understand was pretty much an industrial section of Sweden, so the education is somehow different.**

I see what you mean but I don’t think you can say that because you can’t limit this to Malmo. You have to use the whole Skane and then I mean. You basically have, I mean there is a big university, Lund. So you have a lot biomedical companies, a lot of IT companies and then you have big industrial companies like tetrapack, alfa laval and… So there is a lot of high tech stuff and a lot of industry stuff in there. And I mean I’m not so sure this is so different from Copenhagen. I mean the Alfa laval and tetrapack is different, that is more mechanical engineering, heavy industry that is not present in Copenhagen. So I’m not sure. So in Copenhagen you have certain type of people and now you can utilize in Malmo in that sense it is the same.

**96% of the people that are commuting are coming from Sweden from Denmark.**

I think that is completely different reason. I mean it is cheaper to live in Sweden both housing is cheaper, food is cheaper, cars, pretty much everything is cheaper. And there is higher salaries for the same job in Copenhagen. So a lot of the times for instance, if you call a hotel up [in Copenhagen] to make an arrangement or something, I mean they answer in Danish but as soon as I start speaking in Swedish they continue in Swedish. There is a lot of service personnel from Sweden in Denmark. And I don’t that is because
I mean, there were no service personnel in Copenhagen until they built the bridge. It is simply you have 25 minutes and you earn 3,000 more per month doing the same job in Copenhagen that you once did in Malmo.

**With specially the people not educated for the job, this kind of evens out the fluctuation in the labor pool?**

Yeah, and the funny thing is that the differences have come to an equilibrium. I mean they should be, the housing prices should become more expensive. I mean if you take economic theory they should go up in Sweden and down in Denmark but it hasn’t. But particularly it has to do with the two different currencies. I mean the DKK is about 20% more in Sweden sort of speak. Not only do you get a slightly better salary, but additionally get 20% extra when you take the money back to Sweden. I don’t know what happens with taxes and stuff.

**Yeah, I learned a little about that in the morning. The price has been evening out but the transferring of people is very much correlated with economic things within each border.**

That is what I figure. I don’t think there is an abundance of service workers in Malmo that doesn’t have a job and there is a shortage in Denmark. It is more like if you are working in a hotel in Malmo you can work in a hotel in Copenhagen and you have a 25 minute train ride and have 20% more money, of course you go for the job in Copenhagen. That is what I think. I don’t think it is complementary in that sense. I believe it has more to do with economic factors. That this is the case. Because I I think there are more Danes living in Sweden commuting to work in Denmark than Danes commuting to work in Sweden. Danes would be more from Sweden commuting.

**What I mean by complementing is that when there is a shortage in Copenhagen it is easier to get employees from Malmo than to e.g. increase immigration.**

Of course. I mean that is for sure. The bridge has made this much, much easier. Which is in a sense strange I mean it is 25 minutes in train and if you took the boat it took 20 minutes and you had to walk to the boat and from the boat. So it is slightly shorter in terms of time but it shouldn’t do that much I think but it has. And that is strange in a sense it feel like it’s much closer now with the bridge.

**It is maybe the hassle?**
Yeah I think it is the hassle. That is true. But then if you go into sort of education vise I don’t know if there is so much complementarity between Skane and Copenhagen actually. That I can’t say anything about.

[Ulf reads a definition physical resources]

**Would you say these have changed with the bridge or not?**

No. I don’t think that has changed. No I don’t think so. I mean if you look at, I mean land and water haven’t changed because of the bridge. Skane is Swedish, Copenhagen is Danish and I mean you could very well as a Dane own land in Sweden beforehand and now. And it is the same the other way around. Timber and minerals are not present on the other side they are still further up north. Of course the bridge has done something for the transportation of it.

**But they haven’t been created as a result?**

No

**The only thing that comes to mind “locations in relevance to others”? Malmo and Copenhagen are…?**

Yeah they are surely more related, closer to each other than they were before, definitely. Particularly because of the people going back and forth to much larger extent.

**But they are talking about this Fehrman belt?**

Yes.

**You could perhaps say that Germany is becoming closer to Copenhagen as a case of it?**

Yeah (tone doubtful). To some extent that is true. I mean in many ways, the air traffic and the flights of today have put everything closer than they were before, but they are only closer in terms of travelling time. And I think that’s, we have to remember that cultural differences, psychic distances and all that they haven’t changed. May the awareness but there are differences and people are not scared to some differences because they are much more well-traveled. But the distances that are still there, the only difference is the travelling time and transportation time if you want to talk about physical product. But otherwise there is much of changes.
The next thing is the knowledge resources. Have you for example experience the Oresund Univeristy. They are trying to connect institutions across borders?

I don’t know how much of that there is actually. I don’t think so. I think, students are much more aware of and find it easier to take the university education in a different Nordic country than they did 10-15-20 years ago. But I don’t think that has much to do with the bridge. That is more like as soon people get very well-travelled in Europe they find Denmark much closer to Sweden than it was before. I mean it is this simple human logic. [example about that]. That has changed but I think there are other problems and other things when it comes to the education system.

Has the school here which is part of the “Oresund University” encourage you to be in some sort of cooperation?

No, not at all. I mean co-operations are on an individual basis. I mean there are these, trying to connect university with another university but you need to have an exchange partner. I mean, I don’t see much of a reason for Lund an CBS to have an exchange agreement. They might have. I don’t think it’s many people coming to Copenhagen for exchange program but there is a lot of people coming to Copenhagen to take their education. But that has more to do with other things than the bridge and that has more to do with globalization. It is easy to go to Copenhagen and back home. So a lot of people come here and take their education in Copenhagen, vice versa I don’t know. It has been, when it comes to the Nordic countries, from the Swedish perspective, in the 70’s and the 80’s there was a lot of Finnish people coming to Sweden to take their education and when I say education in basically business management area. In the 80’s and 90’s there was a lot of Norwegian coming to Sweden and so far I haven’t seen that amount Swedes coming to Copenhagen. But there has not been that much of exchange between Denmark and Sweden. And I don’t know if Denmark have felt there were lots of Norwegians earlier. Those things I think have a lot to do with the development of the system in the different countries at a particular time but not the region as such.

Cost of Capital, do you believe that the integration has had an effect on cost of capital in the region?
That is difficult to say. It might have, it is cheaper to get a loan in Sweden than in Denmark. So I mean there should be a lot of Danish firms in Copenhagen in particular that take loans in Sweden and in Swedish currency in a sense. But I mean that hasn’t changed because of the bridge or the region as such. I mean the awareness might have increased but the differences are at a different level. This is of course if you are really in a finance sector you should know that already and you would borrow money where it is cheap and utilize it where it is... I don’t see the bridge should have changed that, I mean money should be able to travel pretty easy without the bridge. So I don’t know about the cost of capital.

Porter talks about payment. There are two different currencies… that must create some sort of problem.

No really. It depends on aspects. You can’t go over the bridge and start buying for, but maybe you can [I think you can]. I mean it is so easy, just the next time you go over change it the other way around. I don’t think that has become easier because of the bridge. I mean most of the time both of the currencies have been pretty stable. And the relationship between them are pretty stable. There are some fluctuations but … I mean it is difficult to say. I mean for Swedes it is a great opportunity to go to Denmark and work. I mean you earn at least the same amount of Kronur as you would in Sweden but then the DKK is 20% more valuable than the Swedish currency. I mean the banks. Me for example I have same bank or at least the same label of a banks as I do I in Sweden I don’t pay anything for moving my money from Denmark to Sweden. The only thing that happens is when I move 1000 DKK to my Swedish account it will be 1200 SEK. So that is, so for me is beneficial to work in Denmark and take home the money to Sweden. And then also with the tax agreement there is that in the Nordic countries you always pay taxes where you work. Which means that I pay my taxes in Denmark and then I take money home to Sweden. And as they have it, expat tax for five years. Means that I have the same tax rate as I should have in Sweden, otherwise it would be more in Denmark, the taxes are higher on income. So the first five years, I earned the same amount of money as I did in Sweden, maybe even a little more and then on top of that it becomes 20% more when I take it home and my taxes are already paid. So that’s good. The other way around is equally bad then. I mean if you are Danes and you go to Sweden you would earn the same amount of money as you would in Denmark but when you take it home it is only worth 0,8 or there abouts. And you would pay the taxes in
Sweden which doesn’t have this expat tax. So you would pay the same amount, well you would pay lower tax than in Denmark but I don’t know the currency becomes very strange.

Then the problem comes of course that both countries have done very well by staying out of the Euro. It is lower interest rate both in Denmark and particularly in Sweden than the Euro-zone, though Denmark is connected to Euro which Sweden is not. I don’t know actually but it is on a case base.

**Do you believe that customers, big segments and/or niche segments are being better served with integration than without it?**

I think they are better served. It should be like that. I mean any segment or niche segment has an easier time of being served from a larger population. With the bridge and the integration, it should be like that. But some extent on a case based, it might very well be so that a niche segment in Sweden is now competing with the same niche segment in Copenhagen to a larger extent with the service provider. Before the service provider was only for Sweden but now it is for both which is slightly worse but that would be on a very particular case. Otherwise it should be better.

**Do you believe the customer is more sophistication because of the integration?**

It should be the same kind of reasoning, you have to look at it from particular cases. I mean if you are a Danish firm and the best supplier is Swedish then I don’t think the bridge has done that much. I mean you would have supplied from that supplier earlier too because it is quite close. I don’t know anything which has. It might be easier to some extent, you might send it buy train easier or drive it over easier so in that sense it might increase sophistication. It depends a lot of what kind of business you are talking about. Most industrial firm and particularly in small countries like Denmark and Sweden which are small countries where the companies have been international for a very long time. I mean they are not sort of stuck with a Danish supplier that is inferior to the Swedish or the German or the Japanese. I mean most of them already know that the Japanese is the best and therefore they have bought from the Japanese supplier since a long time ago. And I don’t think you will find on very man occasions that suddenly the customers in Denmark have gotten the possibility of reaching a better quality or better price quality because of the bridge. I mean in some cases for sure but most of the
time no. It might be so in the future but I don’t know, it is definitely not decreasing. But I’m not so sure that the sophistication has increased so much at least not so far.

**It is perhaps caused by other things than the integration like globalization and the internet?**

No, yeah to some extent but it depends on what you are talking about. Internet, globalization and all these things are very overrated. You talk about Swedish industry that I know the things that… you can do it on the web; stock warning systems. All such systems existed long before the web and computerized. But they were sort of tailor made for a particular industry and the industry customers and big customers that wanted in on that system. That is nothing that has sort of changed with the world wide web, particularly when you talk about the large industrial firms that have been international for a long time. I don’t think the globalization has meant that much either. I mean transportation cost yes, definitely. That you can pursue activity in a place where you earlier couldn’t because transportation have made it uneconomical, might now be economically reasonable to do. Then it depends of course with information, communication technology with the globalization there is much people that can do things, I mean much smaller companies that can do things on an international level than they could earlier. I mean small companies selling particular things. I mean if you have a web page and you sell things through your web page it is kind of stupid not to have the web page in English and let everyone in on it… [talks a bit about this, very interesting but not to the problem at hand]… it is very much a retail thing globalization and information technology but industry hasn’t. Many of the things that people say is so new and has been completely different is not true. It was there long, long time before the world wide web. [a pen example].

**I’m thinking also about the geographic scope of the companies, some companies set their operations on country borders but here you have an economical unit that is cross border and do you believe that companies are setting up to this region or are they still doing it on a country level?**

I’m not sure how it looks but it should become region rather than country level. I mean it makes no sense in many cases to have one thing in Copenhagen and on in Malmo. I mean you could do it in Malmo or in Copenhagen the location you think is more optimal.
So should the brain be in Stockholm or should it be in Copenhagen when you are thinking about Malmo?

That is a good question. I think that depends also. One has to remember, it depends on what kind of business it is, but when you reach Stockholm. You are only one third up in Sweden so if you have business that expands all over Sweden. Putting the brain in Copenhagen doesn’t make much sense. If you think about a consultancy firm for instance which basically works with let’s say, companies that are international to some extent and so on. One of those consultancies might very well be set up in Copenhagen because it is probably easier to attract people to Copenhagen than having one in Copenhagen and Malmo. But I mean the Copenhagen one will not substitute the Stockholm one and the Malmo one wouldn’t substitute the Stockholm one either. But on the other hand what the bridge has done is basically physically connected one and a half million people on the Danish side with one and a half million people on the Swedish side. Then you have Stockholm which is almost two million people if you take the greater area. This region can be compared to the Stockholm region and earlier it couldn’t because then the Swedish side was quite small and the Danish one was not equally big but almost. So when they didn’t have the bridge it was easier to have it in Stockholm and serve Malmo now it might be easier to have it Copenhagen to serve Malmo but the Stockholm one is not substituted. But firms coming in from abroad, they might see a much greater potential now on the region because suddenly now it is not like one and half million on the Danish side and one and a half million on the Swedish side if you take the greater area of Malmo and if you take Skane basically. Now they see a region of 3-3.5 million people. It is physically connected, there is no barriers what so ever, you can just get on a train and travel into Sweden. I mean it is no problem at all, earlier you had to take the boat and there was some sort of customers things so it much easier for companies travelling back and forth and in fact serving customer in the eastern part of Skane from Copenhagen. Earlier I guess you though much about this was two countries, and you will put something in Copenhagen and something in Sweden not necessarily in Malmo but perhaps in Gothenburg to serve the Southern part of Sweden. Then you have the Stockholm serve the middle and the South, Southeastern. Now you put it in Copenhagen and you serve the whole thing upon till sort of it becomes too far and Stockholm takes over. So it has kind of changed the limits, border.
But I guess it depends a little bit on the industry as well? Like McDonalds is Sweden and Denmark and consultancy firm is more retail based.

Yeah of course it depends on the industry. It makes no sense of having a 7-11 in Copenhagen and say it serves Malmo that would be a disaster of course. But for a consultancy firm I mean I might very well see that, and I think it is that way, it is actually and has been I don’t think it has too much to do with the bridge. If you look at BCG or Anderson consulting, or Accenture or McKinsey you would see that these are in Copenhagen and in Stockholm. The difference now is probably much more serving the southern part of Sweden compared with the Stockholm office. Because this become sort of an integrated region and there is no…

A friend of mine works at Bain and company and they have three offices in Copenhagen, Stockholm and Oslo and they look at it as one unit and then they serve Malmo not the Stockholm one. They then transfer employees as necessary.

Yeah, and I think that is how it is looked upon. So it is basically that the Danish serve more of the Swedish part than they did earlier. So the region kind of thing integration. Otherwise there will be three offices, One in Oslo, one in Stockholm and one in Copenhagen. But I think that has a lot to do with geography [example Bain & Company in NV US compared to Scandinavia]. Of course there are three offices because there are so much business going on in these hubs and you can’t serve it all from one place.

There are evidence that the increase in companies going across borders are mostly doing it to get closer to the customer. What I’m thinking is one reason would be to use the factors a little bit better and place the value chain in the upstream as well across borders. Do you know anything about that?

I don’t know anything about that basically. I’m thinking if I can think of a nice example that would fit. It depends there are of course probably pockets of knowledge, there might very well be reasons for Danish company that is now supplied by a Danish supplier to actually be served by a Swedish one. There is actually some sort of pocket of knowledge in Sweden that they are particularly good at doing. I can’t come up with a good example.

There is one example. I saw once a job advertisement for Vestas in Malmo and I figure they were making use of cheaper factors of production.
Might but in Vestas case I rather think it has to do with politics as the industry that doesn’t make money without subsidies from governments. And of course you are Vestas and you want to make sure that Swedish energy companies buy from Vestas when they buy windmill equipment, you need to be present in Sweden, you need to understand the political discussions. Who has the authority and the decision making power when giving these subsidies and stuff like that. That is easier to do by being present in Malmo and Copenhagen for the Danish part. Than just being in Copenhagen because the other ones that are present in Sweden will have the upper hand. In that particular sense it has to do with utilizing the differences in factor costs. But it should be possible. There must be certain things that has a lot of manual labor might be cheaper on of the countries. But I’m not so sure, when you think about it, it is not that much cheaper to do it in Sweden then you have transportation cost and the currency risk doing it and it is probably too little of a difference to say this is a great thing. Then it is probably better to go to Estonia or something like that where you have more stable and much larger currency differential.

If they are moving it should be more through the networks than within the companies?

I don’t know. I don’t really know. I mean there should be possibilities of utilizing things that are on the other side of the border easier now with the bridge with the integration. But I’m not so sure you can do it very well on a strategic, really thinking we should outsource it of offshore it to this place. If those scenarios will come true if there will be whatever, metal workers in Sweden and the difference in currency will increase and so on. And there is a company that needs metal workers. One way to do that is to offshore to a particular area and utilize the lower labor cost. But on the other hand they hire them in Denmark and make them move. I don’t know. It is difficult to say.

[National priorities explained]

Do you think any such factor going on in the region, like medical companies?

I think there has to some extent been a shift downwards in Sweden. Basically Sweden has two clusters of medical, biomedic companies. It’s the Upsala Stockholm area then there is the Malmo, Lund and has to do with a lot with the old medical pharmaceutical companies, where they were but I think actually there is more of this happening here inflow of investment in this region than there is up north. Which might very well have
to do with the integration I would say. I mean now you can open up a biomedic company in Sweden and you can utilize the labor market all the way to Copenhagen to get to get people to work there which was harder before the bridge. And vice versa and open in Copenhagen and utilize the labor market in Sweden. That means that more FDI in that particular industry is going here rather than in the other cluster actually. Which I don’t think can be explained in any other way than with integration of the region.

So the area has become more significant and therefore….

Yeah, absolutely. I mean it has become closer even if it is not in geographic term and hardly in terms of time. But in terms of less hassle it is so much easier to travel now than it was earlier. And there is so much more of transportation opportunities compared with earlier. So it has become closer in that sense. I think it will be more and more significant. I think there is a lot of potential here that hasn’t been discovered yet and also the thing is if you were a foreign company early and you wanted to sort of be present in Sweden I would say in 90% of the cases if it wasn’t like a very particular industry. I mean if it was someone into car industry perhaps a supplier for car manufactures then of course they would end up in Gothenburg where the car manufacturers were. But I mean in general FDI would go to Stockholm as the capital, the possibilities of transportation I mean everything like that. I think it might very well go into the southern part of Sweden. Then you have the region with Denmark which is another country and still kind of cover Sweden to some extent. Stockholm has become much less of a central focal point in Sweden after the bridge.

So Malmo has become more on par with Gothenburg?

Yeah absolutely. Still though the biggest region is and has always been the Stockholm area. Just a matter of how you define it [explanation of Stockholm]. That region I mean in a larger sense is definitely the big economic region of Sweden. No doubt. If you look at all the forest, paper companies, pretty much all the mining companies, their head-office is in Stockholm even though the facilities are far North. And it will take a long time before the Southern time of time of Sweden will take over because if you would move you wouldn’t move to Malmo, you would move to Copenhagen. So you would rather go abroad to Copenhagen. Because if you are there you can utilize what is in the southern part of Sweden anyway.
Would it be completely wrong to say that the integration enlarged Copenhagen and that Malmo has become a satellite city of it?

To some extent yes, I would say to. I mean if one thinks about the… I don’t know about alfa laval and tetra pack are actually headquartered in Lund of if they are headquartered in Stockholm. But I mean those two big industrial may very well be headquartered in Copenhagen, I mean next time they think about moving somewhere it might very well be Copenhagen or on the hand it also means they don’t have any, there is nothing sort of drawing them to Stockholm anymore. Earlier it was to quite a great extent much more convenient being in Stockholm having access to the airport and stuff like that than being in Lund and have to get to Copenhagen airport but now it is not. If you are in Lund now you would never go to Stockholm to fly somewhere. You just take the train or a taxi and you are at Copenhagen airport and that is something that has changed quite a lot that has to do with the hassle factor. I mean earlier people from Gothenburg, if they couldn’t fly out of Gothenburg or if they wouldn’t have a very easy access to Copenhagen they would go to Stockholm. Although it is not closer than Copenhagen, but the hassle factor would make Copenhagen a flaw. I mean now no way they would immediately fly to Copenhagen. So easy. And they if you would think about everything that is sort of east of Gothenburg and south I mean somewhere there was a borderline that meant you would go to Stockholm but that borderline has it has moved far North compared to before the bridge.

Stockholm is completely integrated with e.g. one law, one currency but Oresund is more in a process and the goal or finish line is undetermined and probably impossible to reach in either case. So how would you see it going forward?

It is a very difficult question. But one thing I can see going forward I’m in that sense very pro Scandinavia in as sense. I can’t see why these countries [shouldn’t work together]. Like Sweden and Norway, there you have complementarity of course there is an economic reason as Norway would never hook up with Sweden because they have a lot of money and they don’t want to support us. But I mean you can go long before the oil and you can see the complementarities…. [talks about how Scandinavia should work together and be one unit, suggest one currency to increase integration, insignificant in global community alone but together they would have voice].

[Interview fades out]
Words removed:
Mean
Think
Now
Take
Course
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Particular
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Yeah
Well
True
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Time
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Actually
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Better
Long
Basically
Become
Example
Changes done in the program:
Rounder edges
Mostly vertical
Max words:30
Milk paints
Some variation

Changes done in the program:
Rounder edges
Mostly vertical
Max words:30
Milk paints
Some variation

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Some word have been changed to increase flow or due to poor quality of audio assumed by context. Furthermore some discussion that is not relevant to the subject, like small talk was taken out. These changes are though minimal and do not change the big picture.

The audio file can be provided upon request.

Appendix 03
Total time : 44 minutes and 31 second
Time of Day: 13:00
Place: Office of Copenhagen Capacity
Interviewer: Ingi Úlfar Helgason
Interviewee: Peter Munkholm Nielsen
The labour market and the industries, both sides of Oresund seem pretty similar they both have a clean-tech, medicare and pharmaceuticals the Sweden has a little bit more industrial companies like Tetrapack. How are they different would you say?

The Copenhagen and the Malmo side? [yes]

Well yeah... Normally we look at Denmark and Sweden in ways that Denmark has smaller companies that are more into service where in Sweden you have more larger companies, industrial companies, well known abroad, Tetrapack etc. That is the easiest way to say it if you have thirty seconds to explain it. Other differences we look at for example the diversity because Copenhagen is a capital which means that the diversity of the companies are larger than in for example Malmo. But he way we see it is when we talk about the Oresund region just to say a couple of words about what we are doing. I can see you have our annual report. It says it fairly well. We are an investment agency and we are looking at direct investment, so that is our core business but we work inside these three areas; investment promotion where we see this as modern investment promotion where you have to build a product which you are trying to sell to foreign companies, we look at talent, attracting talent and the cluster development. And when we say cluster development for example Oresund is a good example for instance the Medicon valley. That is an example where we used collaboration between Denmark to kind of say we have something here which is interesting because when a company from for example from China or South Africa look at the world map Denmark is an outskirt of Europe, really small so to get some attention, get some volume I see this as a region, ok we are two different countries that is right but we can collaborate and if you, we use it to say look at this region it is very interesting you can see all these life science companies in Copenhagen, Copenhagen area on Denmark side and also see in Sweden and Malmo, Lund where there is the university and science whatever. So you can kind of map it and see there is a whole cluster where there is a collaboration, a cross border collaboration. But when for example a company from China says ‘well the region is interesting’ we will say ‘ok, now we compete country-wise’ because we want to them to establish on the Danish side and of course invest in Sweden want to locate at the Swedish side. But in that example we are very similar but there are of course some strongholds in Denmark and some strongholds in Sweden but within life science, I have
a map for you, you can see very clear that the number of companies is much larger in Denmark and you have Novo Nordisk and whatever all these large companies within life science but as a whole region you can see there are many different strongholds. In that area Denmark has the largest companies, it is very diverse but of course we have the competitive advantage of being a capital and they are “just” another city in Sweden. But of course where it makes sense we try to collaborate. As you know the Oresund committee which is also a part of this house where we are locate is trying to make some collaboration but of course Stockholm and Sweden are our closest competitor in most areas or sectors.

These is one very interesting factor that you mentioned. I am working with theories about cluster identity which is basically just brand identity. How does the people looking at Oresund see it, is it different from reality and how does Copenhagen Capacity want them to see it?

It is a good question because the Oresund region and the Oresund collaboration is a political project you can say. And there is a lot of political capital invested in building up the region. For example the law maker in Denmark is very much into this regional collaboration and the mayor in Malmo is also involved in it I don’t know if the branding strategy of the Oresund region is the same as Sweden but you can say there are a lot of different layers of course, there is the political, business level and so on. An different organization for example Copenhagen Capacity, could also be the Öresund committee but we are, we for example have a project called Miken which is a conference in Cannes the world’s largest conference for, or exhibition for property development projects and within real estate and at that conference we have an Oresund stand. There we have Denmark on one side and a Swedish side at the same exhibition stand, promoting the region together. And we know that business people and investors are really surprised you could say or fascinated about two different countries collaborating, that we know. And of course that is also the expression [impression] we want to get. But of course there is a strong competition between the two countries when it comes to attracting investment but at the political level we are collaborating very well and the broader lines we are collaborating very well but we are competing as well very strongly.

[The cluster identity model explained]
In Texas they had a very good biomedical industry and in California they had a very good biomedical industry. And California won and the reason they associated with it was when people thought about Texas, they though oil but then they thought about California they thought about you Silicon valley, tech stuff and knowledge stuff so the perception and the identity of the clusters was very different. So what kind of identity people are seeing, possibly they are seeing Novo Nordisk, possibly Nordisk film what is the perception of this cluster and the region?

There are two different things. Of course we have the region and within the region there are clusters. It could be whatever for example the life science. So the region as we see it is not a cluster or more a geographic [unit, that holds clusters] and there is some clusters. And some of the clusters, depending on who you speak to. Some would say the clusters are more or less always cross border clusters, because it would not really make sense just to say that down in Koge you have a cluster of ten companies, of course the cluster will be across border. Sweden and Germany and whatever. But of course we have different clusters within the region which we are trying to promote for example the Copenhagen Clean-tech cluster and that cluster of course feeds into the storyline of the region. That in the region you have this cluster with a lot of companies within clean-tech. But I don’t know at the higher level which subjects. How much it benefits the region more than Copenhagen or Denmark something like that because… Copenhagen Clean-tech cluster do facilitate some cross border collaboration with other clusters but I can’t remember if there is any Swedish Clean-tech clusters.

I looked at Invest Skane and they are trying to promote Clean-tech as well so I assume there is something.

Yeah of course. That would be some companies, of course within clean-tech and you are right that Denmark and Sweden are very similar, there are some differences of course but in the broader picture we have the same competences you could say. Where Denmark is stronger in clean-tech, Sweden is strong in ICT for example. If you look at the rankings in the different sectors maybe. Again it depends on how you analyse data but that is the picture that is drawn in the branding material and such. Story line of the investment promotion agency and in international rankings. For example WWF made a collaboration this clean-tech group where Denmark is no. 1 in some clean-tech innovation. But in another ranking of I think Economist Intelligence Unit some e-ready
network, readiness or something like that… Sweden are number one. There are some rankings that indicate which stronghold that are present in …

[that may of course include Uppsala or…] Yeah of course and Stockholm is really strong in ICT. But for your question about investing in Skane promoting clean-tech. It must be interesting. I don’t know if there is any formal collaboration on clean-tech but I know there is a collaboration on life science. But life-science are also a cluster initiative that has been going on for many years now. We can take the Copenhagen Clean-tech cluster is a fairly new cluster initiative. So maybe we’ll get there if it makes sense to include the whole region, but when we promote the Denmark or Copenhagen, promote the region we include the region. For example the labour market you have access to that many customers, that many high skilled labour forces. Whatever, engineers… then we of course include the south of Sweden because of the bridge and it is easy to commute. When we say ‘hey there is a market potential for X amount we include mostly south of Sweden as well as a geographic area we can reach within an hour or so’. When you say Jutland you can just as well say south of Sweden. And we know when a company are locate in Copenhagen or generating in BMP there is some effects on the South of Sweden as well because of commuting and partnerships and collaboration between companies and so on and so on.

But you were asking about the brand of the region?

Yes what I’m wondering about is the perception outwards versus the reality inside and if this matching. If I say something to you for example New York, you will probably think about a particular industry but that may be quite the opposite in actuality.

I know we are really strong in clean-tech in perception to the outer world. When they say Copenhagen they think clean-tech or for example the for industry. Because of the restaurant Noma for example a lot of press and was best restaurant. Ok Denmark has some competences with food, so that industry has so long industry with the bacon and such. Of course that does something about the perception about the region.

But is there any because you have, the Copenhagen Capacity, the committee and invest Skane are all owned by government..
Yes more or less.

**So are there any industries that are unhappy or something that they aren’t being featured as some of the others?**

Not what I’ve heard of. You mean an industry that is saying ‘why aren’t you attracting companies within our sector?’ [yes]. Not what I know of. Also we are not owned by the state or the government, we are what do you call that ‘self employed fund’. And we work for the region, the Copenhagen region and region Zealand. So that is our connection we are attracting companies only to Copenhagen and only to region Zealand, for foreign companies wants to locate in Fyn or Jutland, Aarhus then they go to invest Denmark. Because they cover the whole of them and these regions. But I don’t know if a company within tobacco or airline service calls us and says ‘hey want to locate’ and we say that ‘we are not working within your industry’ because all companies are welcome of course. But we are organized in countries and sectors. So of course we have a focus on clean-tech life science, ICT, logistic but we also have focus on markets so whatever company for Holland or UK so we are calling whole countries as well so in that direction we see Denmark as we have some strongholds and position where we have something extra to offer companies. For example life science where we have a strong cluster, the Copenhagen clean-tech cluster we have a strong cluster there. So that is a bit of a selling point we can say ‘you can become a part of this incredible network that you can’t find anywhere else’.

**There are a lot of knowledge resources within the region, do you see the knowledge transfer physically sort of. You have the Oresund University that is quitting but is there anything coming from this collaboration.**

So for example a collaboration between Lund and CBS or whoever…

Of course there are located close they are located close it is easy to collaborate. We don’t know how much because it doesn’t really deal with that.

**Are you working on any sort of networking on that or …**

We are not, unless it is part of for example the Copenhagen Clean-tech cluster or other cluster activities. So bring in the different stakeholders within the region; universities, companies other organizations. So they are invited of course.
I’m wondering about the cost of capital and venture creation. I looked at tendens Oresund and the new venture creation isn’t that high within the region.

So the new venture creation?

It for example says that the number of companies that have Danish owners on the Swedish side has risen from two hundred to seven hundred. They didn’t really find it that high. I found it interesting that it said that it was trying to be closer to customers but not like using R&D or something. Perhaps they just hire the people rather than moving the stuff.

I don’t really know but my though would be why locate in Sweden when it is so easy to commute.

So ‘it’s easier to move the people to the mountain …

Yes exactly. But that would be my first… but if 700 is a high number… No I don’t know. I don’t know where the data is from anyway so it is difficult for me to comment.

It is also about that America has for example been said to be better financing their companies, they kind of get the right capital at the right time and kind of move their companies very fast in that aspect.

Who said that?

I read some report about that and do you know how the environment for getting capital in is?

It is depending on which sector. It is very specific or customized you might say. For example it is determined by the politicians mostly, how many funds are allocated to the area in different years. I don’t have any specific if it is good or bad. But there is a lot of attention to it and it is depending on which area you are in or sector you are in of course the area that has a lot of attention from the politicians the money is flowing in different. But I don’t have any numbers for… yeah. But it should be ok.

I’m also thinking a little bit about the geographic scopes of the companies do you experience that the companies are coming here to exploit Denmark or is it to exploit Oresund. I talked to one of my strategic professor and he said in some sectors they would try to locate in Oslo, Oresund and Stockholm and try to cover
Scandinavia they would think about would think about borders rather than region. Could you tell me anything about?

It is right that this Scandinavia is seen as a one region so when a company is coming to Europe it looks ‘ok we have Scandinavia we should probably put a HQ somewhere in the region, where should we put it’ this depends. It depends on the type of company, what is the scope what is the aim. What is the company doing, if you are selling mobile phones you might be in one location, if you are selling something else or some services you will be placed in another. There is no rules of thumb that … it is depending on case … each case are very specific or very customized. Each time it could be a CEO that has taken some location in Denmark.

Are you then competing mostly with Stockholm?

Yeah, generally we are competing with Stockholm. Of course Oslo and Helsinki, Hamborg as well. But mostly Stockholm. Out advantage is that we are closer to the continent. And we are trying to promote a lot of different advantages placing in Copenhagen of course. But again it is depending on which companies it is. I know logistics are looking at the outreach of how far can you go within 1,2,3 hours of time. What about the airport. The Copenhagen airport is much more international than Stockholm for example more international routes. That could be an advantage in some case but in another it would not matter at all. But we try to build the best business case of each company and provide them with unique selling points. That they should locate in Copenhagen or Denmark.

I saw that the focus on the Stockholm office is more or less equivalent of Copenhagen Capacity. I saw regional headquarters at Stockholm page but not on your page…?

I think you can find Scandinavian headquarters and shared service centres. But from when we are competing with Stockholm, Malmo is closer to Copenhagen than Stockholm. In that sense the region, be benefit from Malmo more because we are a part of a region, because the talent pool and access to cluster so yeah.

Are companies generally coming to get resources and capabilities or is it market?

Of course the market, the Scandinavian market. But again out three different areas, the talent access to educated labour force, the right competences within the companies area.
Is very important. Very important and we know that. This project or this … and why we try to attract foreign talent to come in. But also the cluster, or the existence of a cluster or industry which are highly developed. So we know that if there is a strong cluster. There is also talent. The three different areas are intertwined and works together. With a strong cluster you can attract talent, you can attract foreign investment and with a strong talent pool you attract companies which will form a cluster in the end. So it is intertwined. But competences are very important and access to labour. Because yeah, that is more or less what we can offer. You can see other areas, countries are more or less working with these economic free zones where you shouldn’t pay any tax or you can operate without paying anything ‘we are just happy to have you here’. We say ok ‘you have to pay some tax’ we know that is a cost but the quality is high as well. So that is kind of the story you are trying to tell, that you have access to partnership and competences in a much higher degree than in other places.

So what you are saying is ‘we know it is expensive but at least it is one of the best if not the best’

Yeah. But sometimes we are not that expensive and kind of surprising but things have improved and I know there is a lot of attention to the area to build up which we can use to attract companies.

Any challenges that you are facing within the region. It is a broad question. But what are the major challenges that Copenhagen Capacity is and what the challenges that the companies that are coming here see?

I think the… [had difficulties answering the question]

I mean when I met with Oresund committee, who of course have different scope, they mentioned different legal environment. And that you have different currencies. This is perhaps not as big a problem for you as you work on promoting one country.

Well of course there are some differences but… Well … I’m thinking what different consultants are saying and why we are losing a client. In broad terms it is the areas cost and quality. We have some proof that the quality is improving faster than the cost is rising. Plain and simple you have to pay more than you get out of it, it is difficult but to get the whole of the region to work together. To get stakeholders, both private and
public, to work together to build the best business case. That is a challenge, but we are getting there. For example the Copenhagen municipality has created this international citizen centre or something like that where foreign experts or workers can get all their permits and paperwork done very easily and very fast. Just an initiative like that is a strong selling point. If you here to work you are moving your company you can sell your business very fast. If you bring some workers with you can get the permits very fast and very easy. For example Chinese companies, we got the set up ready. We have some lawyer ready to set up your business, fast! We have person who can speak Chinese or mandarin or whatever. All the paperwork are in Chinese or at least in English. The Copenhagen commune (municipal government ) has translated all their paperwork in English and that is a huge advantage for us.

So you are trying to provide better service than they would get from competitors?

Well you can say to have different data. There is the business environment, it can be business environment; it can be business or service, like framework conditions. Then you have some specific sector; it could be whatever, it could be tax benefits I don’t know. That could be also the framework conditions. But that could be some specific about the area, then you have some unique selling points at the end. But trying to get the whole product and make it as easy as possible to get the investor to locate in Denmark that is important. And we work closely with regional stakeholder, Copenhagen Commune, municipalities in the region to try to make it as easy as possible. So that is very much on our agenda. But we work with whatever we got. But I think that is the main challenge.

[interview ends]
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Clusters was replaced with cluster

Changes done in the program:
Rounder edges
Mostly vertical
Max words:30
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Some variation

www.wordle.net

Some word have been changed to increase flow or due to poor quality of audio assumed by context. Furthermore some discussion that is not relevant to the subject, like small talk was taken out. These changes are though minimal and do not change the big picture.

The audio file can be provided upon request.
Appendix 04

Total time : 56 minutes and 07 second
Time of Day: 10:00
Place: Office of Region Skane
Interviewer: Ingi Úlfar Helgason
Interviewee: Eskil Martensson

small talk

Eskil introduces facts about Skane among others

Maybe it is good for you to know what my position is. I deal with interregional and international cooperation which mean that I coordinate the cooperation with Denmark. Region Skane's cooperation with Denmark, I try to coordinate there to support to our politicians and try to get an overview of what we do dealing with strategies and so on. And then what is interesting for you we deal with trade and industry and so on. [...] there are different departments dealing with clusters in Skane and so on [...]

Eskil Explains what is his position and if further information is needed that he can get answers from others

the thesis explained

I'm getting interested in in policy... I can see that Oresund committee, invest Skane and Copenhagen capacity they have a focus which is very green and clean-tech. Do you know why these industries were chosen was it because of capabilities or just because this was were the region wants to go?

Do you base on Ör us when you say. Let me ask you a question; in what way do you mean ‘they are chosen’? These is a history, we have the Öresund science region. Have you heard about that? [yes] You know the Oresund Science region and there were four and it depends on how you define it, it was four clusters even five, six clusters. Which you had defined; Oresund Environment, Logistics, Food and IT and then you were talking about beginning of nano technics and so on. They were established as platforms, financed and so on. But for different reasons, different opinions on financing and leadership ans so on, they were finished as platforms one and a half a year ago. You know about this [yes]. So in my opinion when you have that you have in one way
established but this is four or five clusters we in common. In my opinion what we have right now we haven’t really defined what are our common clusters … we are talking about clean-tech because it is, I think everybody all politicians and so on think one of our advantages compared to many other regions; good environment and we are also good technical development and clean-tech is one of our main strengths. So therefore all think that clean-tech is a good thing. As you heard the Oresund committee they have a group of civil servants who are working with clean-tech. Because you have the Swedish Clean-tech cluster more or less and the Danish but they don’t work very much together. That you probably heard we have civil servant working group and also a political group working within the environment in other ways I don’t think we have established what is an Öresund cluster and what is not. I don’t know what you have found out so far, yeah we are pretty good at IT and we are food and so on but we haven’t established. [so it is not integrated enough?] And there is no organization for it in my opinion right now. I don’t know… what is you opinion about it?

It is a little bit; you have Oresund which is a big umbrella. But Denmark and Sweden they are separated. It is not integrated totally.

We are very successful in many ways doing the integration process. But you know, sometimes you take two steps ahead and one step back. And I think talking about this we have made many improvements when we establish those cluster but I think it was a step backwards when you, well maybe the organization wasn’t very well working but if you say we finish this it is good to have discussion, what do we do then how will be continue to find new structures for Oresund how will we work together. But that discussion was pretty problematic so since then there hasn’t really been a real discussion now what we need right now is that discussion. ‘In which topics will we work together, where ..’. I think for example clean-tech we have started but the others; food and environment and so on. Those organizations that were decided to finish they didn’t do anything new. And I think it’s time to have this discussion I think is a lot of this research and so on going on between Sweden and Denmark but on little bit on a organizational level there isn’t really anything now.

So it needs to be on a political level, organizational level and business level?

Yeah all of it. In my opinion. Because I think when those organizations were closed down … We needed to get a new discussion on what do we do next. Maybe those
organizations it was time for them to do something else, but we haven’t really had any
discussion on how to continue, how to not lose those things, the cooperation we have
already started. I don’t know if that is something of the picture that you got?

Yeah, there is obviously you have something going on but it is not very much about
connecting researchers. Just individuals…

Oresund committee is a political platform, not an operational organization. I mean it is
the Skane politicians and the Swedish politicians having a political platform for those
questions where you need to act together; toward the Swedish government and the
Danish government. Oresund committee is not mean an organization for building
clusters.

Should they be more in a political stuff?

And they are, even when we are talking about clean-tech and so on they are on more of
a political strategical level. That is the right thing. I think Oresund Committee is more
like initiate the discussion to initiate the things to happen it is not where the work
should be done. It is more of a political initiation of the process in my opinion.

Yes, that is very interesting.

I think the universities. You say to will have an interview at someone at Oresund-
University, who…

Sara Virkestad

Yes, Sara Virkestad. The thing there has been a pretty successful cooperation but she
will tell you it is not that workfull good process right now because they don’t get
financed and so on. So I think at the Oresund Committee level and also at Skane level it
is more like we should initiate the discussion on how to get…

My perception of Oresund-University is that it is an exchange on a student level
than on a researcher level?

It is complicated. Because the Oresund-University was connected to the organization
Oresund science region which was a researcher cluster. And Oresund-University and
Oresund Science region were financed more or less together, more or less one
organization and the Oresund Science region doesn’t exist anymore and Oresund-
University is not much existing unfortunately so there has been a formal organization for the cluster which I don’t think we have right now. And there is a need for a discussion about what do we need.

**How has Skane benefited from the cooperation, is it just from the people that are going to Denmark to work and to have more significant unit to sell abroad …**

Do you mean the Oresund integration process in total? Not only talking about clusters [yes] Very much. Because we have gotten a greater labour market. Really, both Skane and Denmark have benefitted very much the last economic boom you have a labour shortage in Copenhagen and there were still unemployment in the Malmo area, lots of people in Skane getting job in Copenhagen it was much easier to find a new job. Especially young people getting the first job it was much easier to get in Copenhagen. It mean that we have less unemployment in Skane that we would have otherwise. And a lot of Danish people moved to Skane to find much cheaper apartment. They moved to Malmo and started to commute to their job in Copenhagen. So years ago the Danish Krona was very strong and the Swedish Krona was very weak, people went here to buy lot of things. Go to the dentist, cut their hair and so on and they did it for a very good price, here.

**But at a knowledge level and for the companies in the region…**

Companies or researchers… do you mean companies?

**Yeah just like, I mean that this is a knowledge region so a lot of the companies are in knowledge of some sort. How has that benefitted from like a clean-tech company in Oresund is it better of because of Oresund cooperation?**

Talking about clean-tech I can’t really answer that because. I think, I’m not an expert, but I think clean tech has been pretty much working on the Skane side and on the Danish side but not very much together. They have done some, there was the big climate conference in Denmark… they did some cooperation before that but I think there is very much a possibility working together as a one cluster. But I think talking about the companies. If you consider the IT for example, the big and also medical; the big companies has a big advantage in recruiting qualified people. I know that international computer companies in Copenhagen get a lot of highly skilled people from Sweden.
Also medical companies so I think for the companies it has meant that they have a bigger..

**So the main advantage has been a larger labour market?**

At least one of them. Yeah and if I understand you right. You talk about the big companies and not very much research.

*I’m thinking both. Another question I have for you is about the patents. If you are seeing anything increase in patents and knowledge resources? And that involves researchers within companies and researchers within universities? So two aspects of this?*

One important thing is that you have a bigger mass of quality people for example Sony Erikson in Lund and there are the big medical in Copenhagen and so on they can more easily get qualified employees.

**The value chain. In this [point to a Tendens Oresund booklet] it says that most companies that are coming to from Denmark to Sweden are coming to be closer to the customer. But it is not very much that the companies are coming to put up operations in something else like creation, business development or any sort of development. Do you know why this is?**

Do you mean big companies getting to the other…?

**If says that before, around ’95 there were some 200 companies in Skane with Danish owners and now there are 700. And they believe it is to be closer to the customers. So a Danish company, e.g. Epal they would open a store but it is not like NovoNordisk opening a lab. Do you know why this is? Is it just easier to get people to Copenhagen or …?**

I don’t think there hasn’t been very, very much of companies swapping countries because still you have different legislation and barriers in many ways. Most companies find it very easy to start business on the other side and getting… because there is for example there is a company Mercedes Bens and they tried to work on both sides and it is easier to work on one side having one legislation and so on. I mean one of the reason there is not as you could is because we are two different countries with different legislation so it is a bit more complicate you really have to see if you get the benefits
from it if you make the effort. I think for a small company it is very so much extra things to relate to when you are in a different country. Are you thinking bit or small companies?

I am just wondering generally, but it is also what I wanted to ask you next what are the challenges, you mentioned the legal environment, I guess taxes is another issue …?

You have very big differences in taxes and so on and legislation and so on. For example if you are working in two countries it is difficult as you maybe know. That is a thing where the Oresund committee acts, trying to get rid of the barriers for example if you have a full time job in Denmark and then you take an extra job in Sweden your social security system changes from Denmark to Sweden and it gets very complicated. There the Oresund committee has been lobbying to the Swedish and Danish government to adjust their legislation. Not there will be a solution in a EU perspective. One of the problem is that we are two different countries if you compare to another region where you don’t have a border situation. I mean with borders I believe we are more successful than many other regions. I don’t know have you studied other cross border regions?

No I haven’t. But I have looked at some theory and I looked at the OECD report they did around Oresund many years ago they also talk about Germany and Switzerland and…

There is also an OECD report from I think 2009 from the Danish side and there is a new one right now that we are doing right now that we are doing in Skane that we will finish this summer. So I think you should have a look at that. They will present it on the 20th of June. It will be a big seminar, it will be in English. So I think there will be a report in English because it is also about research and innovation and so on. So I think that is something you should look at.

Definitely, I will look forward to it.

Do you know how when you are attracting investors, how do they see the region? Do they see it the same way that Oresund wants them to see it or is there any difference?

It is a really difficult question.
I’ll tell you an example [the example of biomedical industry in Texas and California]

You have been interviewing Copenhagen Capacity

They said that medicon valley and novo nordisk and bacon have been doing some stuff for them in food science. And even just Noma (the restaurant) so I was just wandering what is your view?

We have invest in Skane which is our Copenhagen capacity. I don’t know if I’m very good at answering that maybe, if that is an important question maybe then you could send an email to them or something. It corresponds what we want them to think and what they think. That is what you want them to know. That is our brand, what we want them to consider us…

If that is how you are perceived

From abroad?

Yes generally, like I’m from Iceland I guess people think about fish and when you are trying to market film making …

I think one problem is that we are talking about the Oresund region and everyone in Scandinavia knows what it is. But I think it outside, if we are lucky they know what Scandinavia maybe Copenhagen and maybe Stockholm but the Oresund region I think they have never heard about. So that is a problem of branding that Oresund region is new. I think in one term they think it is very interesting that we are a cross border region and that we are a bit of a role model like I said that. We are a cross border region that makes it more difficult than without a border. But compared to other cross-border region we have been pretty successful. And I think that is a lot of focus in European perspective, that is interesting and let’s say you establish in the Oresund region you get two countries for the price of one. So that has been a good thing and I think we consider us a clean environment and they often talk about the Scandinavian social system, they think we are well organized and so on… And we have a pretty good health care but on the hand it is a problem that the Oresund region is not well known. What is the Oresund region and we at the Skane side don’t believe that just branding Copenhagen if we just brand Copenhagen it is just the Danish side. It is impossible to brand Copenhagen area that includes Skane. So I think one of the problems of the branding our region.
So is Copenhagen a satellite city of Copenhagen?

That is not we consider ourselves but if you brand it like Copenhagen, what is Skane then? We think Oresund region, we get the added value by combining the two and creating a critical mass and so on. But we are not well known as the brand Oresund region. That I think is a problem but we know also that a lot of companies think it is interesting if you will have one office in Scandinavia if you put here in Malmo, you are in Sweden and very close to Denmark.

Are you getting a lot of regional headquarters in Malmo?

Some, For example we have the Mercedes Benz that is our neighbour as they are in the centre of Scandinavia here. And Ikea will establish here in Malmo as a centre of Scandinavia. So I think there has always been a competition between Stockholm and Copenhagen and Stockholm has got the most international companies but as the Oresund region we are more attractive than separate.

I am also thinking where Skane is in a Swedish context, because I looked at the number of patents in Sweden and Denmark, and Sweden has three times more patents than Denmark does. How is Skane in that context. Because you know there is a very strong cluster in Stockholm, I guess they are getting most of the patents but what portion of …

I can’t really tell it. I know that Lund University is very important in Sweden and Scandinavia. So I can’t tell you any figures but maybe you can probably find the answers on the internet or something. […] but of course it is connected to the universities but an important factor is of course Lund University.

But has Malmo and Skane become a more important part of Sweden than it was in the past. I for example have a Swedish professor and he said that is used to be (1)Stockholm (2) Gothenburg (3)Malmo but now it is (1)Stockholm (2-3) Gothenburg (2-3)Malmo?

Yes we always have message to Stockholm and the government that we are an important part, the Oresund region. It is good to have more than one engine in a country. So we are developing pretty much here and our message is that it is good for all of Sweden that we are an economic hub like the Stockholm greater area and then you have Oresund like two big engines in Scandinavia.
Like challenges is to increase the commitment in the integration processes it is important for you to help us to develop because it is good for you if we develop well. So, yes we have a lot of advantages the location of Oresund, Stockholm is the centre of Sweden but in European context we are much closer to the big markets. So I think there is absolutely a change in the Swedish arena.

Are there any surprises about what has happened in Oresund, something that you really didn’t expect with the bridge and everything?

I usually say that if talk about the integration process first you have the political visions. The politicians said yes we want to create a new cross border region. The next step was to create an infrastructure we were building a bridge. Then everybody thought ‘when to we get integration’ but then not very much happened in the beginning. My theory is that first you political will and then you make the basic thing for making the integration possible like making the infrastructure. Then you have to have demand and when you got… in the beginning there wasn’t very much happened but then after few years you got the economic boom and with that we got the demand. If you were in the middle of 2005, 2006 you got a very fast increase of the integration process because you got the demand for employers and unemployment in Malmo. So there was a reason for getting and in my theory you have to have the political will you make the infrastructure and combined with the market you get the integration. So when you got a need for employers and you got a cheaper housing in Malmo and also you understand you can educate yourself on the other side, you have a different course and different so on. When you start to see the possibilities on the other side it is not just deciding, you can’t really decide what, well make a political decision we have an integration but you can make the needed decisions for making it possible to get an integration. But then when you get the demand then you get the integration but we also understood we thought it was very much a question of infrastructure only but then we understood that it is very much a question of different legislation different social security systems and so on. And also we have a south Swedish chamber of commerce (sundsvensk industry). If you ask them what is the biggest problem for companies. Then they say the problem for workers, the problems for workers for social security system. They don’t say problem for the companies but the problems for the citizens which is our biggest problem. And we are trying to solve them and so on but still you know we live in two different systems and it can be difficult. In the beginning I don’t think we thought very much
about different legislations and so on. If we just build the infrastructure … Then another thing, even now more than ten years after we got the bridge. We have to help the integration process all the time. In the beginning the Swedish and Danish state at a national level and thought we need the help the integration process in the beginning. But then like now it must be an on-going process we don’t need to help anymore. But I think we still need… you can’t take it for granted and for example with the research and clusters is important that the Swedish and the Danish national level are interested in and are also trying to improve the process. Because as you have learned here, if we don’t help the process it might go a bit backwards. So I think we need to work together at a national, regional and local level together with the universities and business sector to improve research and especially the cluster development in the Oresund regions. Cause now I think sometime after these problematic proves when these organization finished. For a researcher today which is very specialized at Lund University and Copenhagen university it is just as easy to work together with someone in California or Boston or Bombay or something like that. If we have common specialised interest for them the researcher it is not a matter of geography anymore with the internet and all…

**That is exactly what my professor said that it happens at an individual level that these researches are created.**

So I think many interested in Lund say ‘yeah my colleague in Bombay’ and in Osaka or Reykjavik but…But maybe they meet at Skype and everything and maybe once a year. They don’t think a matter of geographic we are one region. We don’t care very much about that. If we have a political view we need to improve the process. Because otherwise a student in Copenhagen or Lund think I will take a course in Cambridge or Milano or something like that. Maybe they don’t think it is necessary to look at their own region.

**Wouldn’t like networks, trying to create, networks across [Oresund] strengthen this.**

What I think is what we need to help the process. I don’t think it is a process that will work on its own. If you are talking about demand for employees or so on. I think it is a process that will work on its own. I think where there is demand, yeah we will start to commute as we have done. But with researchers maybe we need to help the process
more. Because otherwise why work with our neighbours when you can work with all of
the universe.

It reminds me a little bit about they sometimes they say it doesn’t matter where
you went to school. It matters who you went to school with. So I mean you are
always kind of meeting the people you went to school with so you connect the
people...

So I think you will hear more about it but I think the mind-set of Oresund University is
very good talking about one big university instead of 11 universities. On a global
market that is a good brand. Oresund University but right now there isn’t very much of
it. But I think that is a good idea, to have a one. Maybe say that is a one big university.
So I think it, commuter that is more of an on-going process there you need help you get
rid of the barriers. But we are talking about students I think you need to help the process
more.

So the market will take of some and then you have to help the rest

Yeah I think especially high research level. I don’t think it is a matter of being close
within the region isn’t number one on their agenda. They don’t really feel, they are
highly specialized are more interested in what is happening at a global level. They are
not that in need for having them in short distance and therefore I think we need to. I
don’t think we need to, I don’t think it is automatic process. I think we need to help it.
And also with the defining, let say we have 5 clusters within the Oresund region that we
want to improve together. I think also it good brand thing. You know ‘in Oresund we
have blab la bla bla clusters’ but today I don’t think we can define it. Or can we, what is
your feeling.

I kind of think you have an agency problem here because it is very good to market
we have 3,7 million people and this many researchers but at the end Copenhagen
thinks about Copenhagen and Skane thinks about Skane. And like you say, I think
it is a very good point that the networks aren’t really connecting. This becomes
problematic in the integration. I mean I haven’t found anything about cooperation,
I haven’t found that much about the cooperation in the region. Everything seems
to be going very well but why is there integration. You can find very hard evidence
about commuting and labour market and infrastructure and house market and
that stuff but you can’t really find any evidence like this, there guys, this invention is because we built a bridge. Or this cooperation or company.

I think some international headquarters have established in Oresund because you get the benefits of two countries. So it like from outside. But I think many companies have thought it is too difficult acting in two countries but as I said here you get people from both Sweden and Demark.

But you have so many smart people on both sides and there must be something that if you connect two of them they would make something that is even greater. Like one plus one is three.

Absolutely I heard some I think from Lund university even now when the organizations have died. Oresund Science region the platforms have dies. On a high research level there is still interaction. They didn’t care very much. Someone even said it has improved. But I don’t think it is at a high level but there are some interaction but on a more like student interaction it is very much depending on this organization Oresund University and now there has been problems about costs for student. You can probably hear it from Lund. They have different opinion, the Danish charge students not going on a program only short courses they are charging the Swedish students and so and so. It is a bit fuzzy it is a bit complicated. So it is not that we are all ‘we really should have interaction’. It is more ‘it is problem, it is problem’.

They don’t think in solutions?

I think right now we need more like a common mindset we are students and researchers we are working in one region. So otherwise I would say the integration process has been very successful in many aspects and right now the part where we really need to act is in clusters and student integration.

Interview ends.
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Something
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Working was replaced with work

Changes done in the program:
Rounder edges
Mostly vertical
Max words: 30
Milk paints
Some variation

www.wordle.net
Some word have been changed to increase flow or due to poor quality of audio assumed by context. Furthermore some discussion that is not relevant to the subject, like small talk was taken out. These changes are though minimal and do not change the big picture.

The audio file can be provided upon request.
Appendix 05

Total time: 1 hour 9 minutes and 31 second
Time of Day: 11:30
Place: A café at Lillatorg - Malmo
Interviewer: Ingi Úlfar Helgason
Interviewee: Sven Junghagen

I moved back here in ’96, I live back in northern Sweden before but all my family comes from here so it’s like home for me. And what I happened then was that I got a guest scholar position at the research institute in Copenhagen called SAMS – The Scandinavian Academy of Management Studies. We have researchers from Reykjavik for example as well, a Scandinavian institute. The main driver behind the institution was the development of the Oresund region. So we did a lot of research on the development of transnational regions, the Oresund region, I was involved in regional marketing strategies and things like in the late ‘90s and really, really early new millennium then I stopped. So I have been doing a lot of work together with Sydsvenska Handerskam, Oresund-University it was actually so that a lot of the things that have happened in this region, actually stems from the office of SAMS and especially turn rummet – the tower room. There we could have an after work beer and discuss large issues and come up with solutions then implemented around the place, like Science-Region-Oresund. That was us over a couple of beers ‘we need to come up with a good brand for this region what are really good at’ and someone said ‘well there is really a strong scientific’, ‘oh science-region-Oresund’. Then told by the head of the institute for one of the regional actors of the Oresund committee, ‘this is a science region’ and then it took off. Oresunds-University it was us stating when we were to these collaborative conferences just saying in one of the coffee breaks ‘wouldn’t it be good if we had a Oresunds-University where we collected all the initiatives?’ And all of a sudden the rector of Lund stood up, because she was the chairman of the collaboration back then ‘next year is going to be the first Oresund University conference’. So I have been close to a lot of the things but kind of in the background, which is nice as well. There is no responsibility when you are there. So I have a lot of contacts and I have done a lot of work and the knowledge that I have within this of course flavoured by me being part of the development from some 15 years ago. I have left it now so now I’m just a quiet observer.
You mentioned three of the things I wanted to ask you about. So I’ll just start with the first. The regional identity, you had the model in the class that was like three pictures [Sven nods yes]. How do you think Oresund is perceived from abroad, how do you think it is and how do you think Oresund wants to be? Is there a difference?

I think, that is. I would say all depending on how we define the Oresund region or the sound region as we called it back then, because the name of Oresund in English is just plain Ore-sound. So the sound region and that also went well with us being sound in a sense with the help of life sciences and so. We played a lot words back then, you know creative guys, crazy guys. That was off the record. I would say if you would mention Oresund in southern Europe no one would know. If you would talk about greater Copenhagen, they would. Then you if you see the identity. If we take Copenhagen their view on integration ‘of it is good, it is good that we have Malmo because we can shop there on Sundays’. Because in Sweden you have the boring employment legislation making it hard to employ especially young people and they need staff with the flexicurity in Denmark so there they can hire the youngsters from Sweden. All of a sudden very skilled staff from Sweden as well because there is actually shortage of skilled staff as well, highly educated in Denmark precisely. And you then come to Malmo, how do we view the Oresunds region? I would say, more consumed by the regional identity, especially those who are true Malmo-ers true Malmo-inhabitants, not the immigrants sort of speak from Stockholm, Gothenburg. Because we have a lot of Swedes not being Skanians but Swedes living in Malmo today, they don’t see this in the same way. Me, if I take it really far it is like, Stockholm is not my capital, Copenhagen is. The king standing on the Kronplads, the grand square there is not the liberator king he is symbol of the occupying forces. Because this city was built a Danish city or town. It is a Danish town you should see the defence system of this old town, it is not toward Denmark it towards Sweden so this is the first defence barrier of Copenhagen. If you go to the old cathedral and look at the ascriptions on the wall, they are in Danish because it was a catholic church in Denmark when it was built. So this identity I couldn’t care less what happens in Stockholm and that is the cynical me. What happens in Copenhagen has an effect on my life as a Malmo as a citizen.
So, Oresund has to some extent increased the influence area of Copenhagen area. There is maybe one thing I can say as a statement and you can agree or disagree; is Malmo becoming a satellite city of Copenhagen?

I think so yes. And I sometimes with a clinch in the eye say that Malmo is not even a satellite city but the Eastern suburbs of Copenhagen and it is to some extent. You should keep in mind that back in ’96-’97 when I came here we were in total 2500 commuters, Helsingborg – Helsingore included back and forth every day. I don’t know the exact figure now [it is ten times] it is something like 25,000 just here Malmo-Copenhagen. But I don’t think the numbers have changed that much when you look at Helsingborg- Helsingore. That means that if we have this strong employment commuting are we then to be considered a city of our own or a satellite of Copenhagen? But at the same time we have a lot of commuting from the satellite communities of Malmo as well. So there is commuting into Malmo from the satellite municipalities and we have a lot of commuting from Malmo to Copenhagen. So Malmo is a hub but also a satellite. So I would say we are a hub for Skane but a satellite in the region, the Oresund region, the transnational region where Copenhagen is the centre, the hub. I think that would be a good…

But with the Oresund region becoming strong has the influence area of Stockholm kind of decreased?

I would say that.

I could give an example that if you are somewhere in between once you went to Stockholm but now you would go to Copenhagen when you go for airline for example to London?

In the industry, when we talk about entry mode when they are supposed to establish not a national centre but a regional centre it was quite natural to put the Scandinavian or Nordic HQ in Stockholm. They don’t do that anymore, they do that in Copenhagen or even Malmo due to the closeness to the airport and it is actually. It is actually convenient. Like IKEA is going to move their global headquarters to here, closeness to the airport, closeness to everything. And they would never ever dream of putting in Stockholm, even though they have their flagship store in Stockholm, the shop of shops in Kongens Koge. The largest one in the world and no new IKEA shop can be larger than that one which shows the importance of Stockholm but they would never put the
global headquarters there. They do that in Malmo. Mercedes Bens they have their Scandanvian or Nordic XXX and a number of other multinational base their headquarters. So if you go from south Malmo to Bella Centre you see all the headquarters, these are the ones that have been relocated from Stockholm to Copenhagen. So Copenhagen is having a stronger importance within the region not just in this region but the Baltic region. There is a power shift definitely.

I was talking to a guy at region Skane earlier this morning and he was telling me that they started the cooperation and built the bridge, built the infrastructure. Demand came so Danish would go to Sweden and Swedes to Denmark but the kind of networking and cooperation is kind of lacking. What do you think about that?

Yeah true. Even though we have the situation where we are in common with Stockholm XXX in a sense. There are of course some very, very important cultural differences. I have heard a lot of business men stating that it is impossible to do business with Danes because they are arrogant and cynical. We never know what they mean because are they ironic now and this everyday charmond which goes on in Denmark which is not what they say but how they say that is important. Swedes are more straight-forward and they can’t really tap into that subtle messaging that the Danes have, and that causes some problems. Which means that they are kind of, in terms of business to business networking, that suffers from that. Meanwhile Danes think that Swedes are too stiff and really hard to do business with them because they don’t get it. So I think that one could say it all boils down to, if you have an ambition to create a good industry climate in any municipality in Sweden there are some things that you have to put in place, its infrastructure; yeah sure. It could be a number of different things. That is not work of science. And I think that this Oresund religion didn’t come true because back in the mid-nineties the regionalization was religionalization. And one of the most important religious symbols we had was this bloody bridge. We were waiting for the bridge to come as a messiah in a sense and save us from despair.’ If we just get the bridge we will live happily ever after’ that was kind of the general idea. The bridge came people started commuting, everybody like ‘oh see how right we was, hail bridge, hail bridge’. And then it stopped because they forgot about other things and one example about forgetting other things is that if we see ok if we build a bridge we believe we will have logistic nightmare with the trains before the city tunnel due to Malmo central station being sack station. You don’t go through it, you go in the sack and then you go out of it
again. So it is an end stop station, it is an in out. Trains have to pass by each other regardless of direction. And they knew that, they built the bridge, they opened the bridge, chaos at the station. ‘Yeah right, of course we need to clear the bottleneck at the bloody tunnel. Now we have the bridge and we have chaos. Now we need to… ‘where was the planning?

The tag line of the Oresund bridge is building bridge every day. So they are not only building a bridge a physical bridge… Do you believe they have failed…

Yeah absolutely. And we actually we already back in ’98 we wrote a report about that for SAMS and this report is available so you should try to look into that. And if you can’ find them online. I have a former colleague and he is a border-liner so I am more than confident he has this on an external hard-drive somewhere in PDF, even though he is not supposed to. But it is brilliant to have him and he is a dear friend as well. But anyway. These other bridges; because you can lead a horse to water but if he’s not thirsty he will not drink. It is like you can solve a communication problem just by installing a lot of computers you have to change the attitude toward communication.

The bridge is like and it is like Oresund University I was XXX back in’99 if we want to get an Oresund University, we need to be able to accredit a degree. Where you go around and you take some courses here and some courses there and then you have a joint degree where Oresund University was the legal institution awarding the degree. ‘Oh no we can’t do that’. Why not? ‘Due to legislation’. Well let’s change the legislation then to allow things to happen. You can’t just sit here waiting and wait for these guys in Stockholm to make the decision for us. Because they will not, they couldn’t care less about the need for an extension of the Copenhagen metro to this square [the main square of Malmo]. Which would be brilliant. Because they have a traffic problem in Stockholm. The national politicians in Sweden sitting in Stockholm, 95% of the time are dealt with dealing with Stockholm problems. Sorry for being so cynical, but they do. It is like in Iceland you have Reykjavik the rest of the island [discussion about Iceland].

You mentioned the culture as a challenge in the integration but what other challenges do you see?

[interrupted]
I think the cultural barrier is getting blurrier and blurrier. Because there are so many Danes here it is like, you have so many Swedes working in service professions in Copenhagen and a lot of Swedes working in Malmo are here but respond in Danish when the Danes comes in to shop and things like that. I think the language barrier is getting… the language barrier increased with the introduction of MTV [story that once the region had two Swedish TV stations and on Danish].

But the cultural barrier, while it is still there but it is important that it is decreasing. I think that there are political barriers, if we go through the PESTEL model kind of. The political barriers are then the … regionalization is a strong issue for the Danish capital where you have the both the national and the local decision makers but the importance, they don’t really see the importance even though it is important. Danes are very nationalistic, protectionist, they are somewhat narrow minded, meaning that even though they are ‘the huge language region of five million people’. So important not to Anglify education and stuff like that we don’t need nationalize because as long as we are good at home all these kind of… And this means that why should the transnational region with Sweden be beneficial for us. That is kind of so that, that drives the politics in a sense. When it comes to Sweden we have the local politicians who really, really see the strong importance for the Swedish side of this region but they are depending on the decision power of national politicians and they are not that keen on working for this. They talk a lot about it, and we now have the secretary of Oresund affairs in the government but these are just words. Words and a piece of paper. Well the political agenda is complex and this complexity with transparency makes it hard to move forward because you can’t really act upon it. It is like a box of chocolate you never know what you are going to get. So it is hard in that sense.

Legal – the border between legislation and political and economic taxation, different taxation system. It is a mess. And it is really, that causes problems. And I think that if we both enter the Euro zone that would be beneficial from a regional perspective, it would be economically disastrous as it looks like now. When you have these banana republics accepted into, and we kind of accept anything into the collaboration today. [interruption]

A number of things that, decisions that could be made if the will was there but it is a lot of hot air. It is a lot of about talking about the regionalization and not so much acting upon it. Put your money where your mouth is. And that is, there are some aspects,
brilliant collaboration. The Copenhagen Malmo Port, brilliant. Back in the end of the 90s when we discussed it in the beginning of the collaboration I called it COMA. We decided it was not a good name, I thought it was funny. ‘Oh, put it in COMA’. No but they have built this new enormous hub for cars, so if you have a car coming in at Copenhagen it comes in at Malmo side and goes on a truck over to Copenhagen on a bridge. Because the car central or hub is in the Malmo part of the Copenhagen Malmo Port. It was before in Copenhagen but they have actually come up with the idea that it is better logistic to put it in Malmo, so a really, really good collaboration in that sense.

Terminal – it is a terminal for cars. So of course we could see and the Oresund University that is a joke – I’m not sure if I should be quoted on that. I called it a joke ten years ago and still call it a joke. It is just a letter head on a piece of paper and it is basically closing down. I could have seen a lot of brilliant prosperous projects driving that and they never capitalized on that. To be perfectly honest they put a none charismatic, no-doer administrator to run the show with no creative drive what so ever, when they needed an entrepreneur. But he might have had fun for these ten years he was doing that. No names mentioned. All in all we could macro and a micro analysis. There are a lot of factors in the macro environment that are not functioning as inhibitors of this regional development. If we make an industry analysis we have the state of industry development we have the drivers and the inhibitors and we have the future state. You remember I believe I showed you the figure in one of the classes. [I can't remember it]. There you have in the determinant of the industry development are a lot of the macro factors but also some of micro but a lot of the macro. They could be drivers or inhibitors. And I would say you see a lot of inhibiting factors for regional development, where you have the expressed but not realized will to drive the development will, you have the inhibitors from none political factors. You have economic factors to some extent socio-cultural factors but that is still, you could see that as a drive as well. There is a lot of will and this side of the sound for integration because we feel integrated to Copenhagen anyway so why not give it the full monty in a sense. So I would say at the micro level you have a lot of small businesses in Malmo that would love to work with Copenhagen companies if some of the inhibitors would be removed indefinitely.

Two things that have come up; after discussing with Copenhagen Capacity and others. I kind of found that you have an agency problem…
Sure. That is what I meant with the decision makers, you have decision makers at local level where you have the will to do something locally. That will is stronger on the Malmo side than on the Copenhagen side due to different regions. I would say mostly that in Copenhagen they believe that they have a strong interlink between national and local. You have these decisions that are made on a local level are not autonomous. They depend on the national government and there you have diverging interests. So the agency problem, yes absolutely.

And to some extent it is a principle problem as well. If you look at the principle agent. Because the agents are making the decisions on whose behalf. Because if they are decisions on their own behalf they are not agents, they are principals or the owners of the problem. But if they are agents, then on whose behalf are they making the decisions? And even though they are making national decision that is also taken on behalf of the local community here. But they have to balance the interest of this local with other localities on a national level and that a problem. The thing was that I actually believed that when Oresund was announced a model transnational region by the EU bank in 97-98, can’t remember exactly but somewhere around that. And it was supposed to be a model region. So it was to be an experimentation where we could build up practices where we could build up other transnational regions within the European Union. I also saw before me a potential that we could be given a certain level of regional autonomy as well. To make decisions locally or regionally, without having to ask for permission on a national level. Because it is of supranational interest, it is in the European Union interest that region XXX. And I saw, right, this a door opener. It was just ‘you are a model region, do something and we see what happens.

It is a bit of a problem that there isn’t a parent or principle in the region.

It is not like I’m pessimistic it is just that I’m, all these years a cynic.

I thought when I started looking at this that the value chains would kind of cross between the strait or sund. But it appears, and I have some data on it, that it is mostly companies that are trying to get close to the customers but not in a kind of the upstream or the value chain. Do you know why that is?

Not spontaneously, could be related to what I mentioned before about some of the problems in business to business. I think it could be also something about dealing with uncertainties it is a certain level to go sort of abroad but still so close of course it
shouldn’t be. Because we source in Bangladesh and we sort all over the place. Why can’t we work with different sourcing and go upstream, it might be so that it doesn’t make sense. If you want to source in Copenhagen instead of Malmo it should be for the reason that you find something better. Because it will be that much kind of different. You don’t have the kind of the resource price parameter. That will not be the case, should be then quality or delivery time and I don’t think you see so much differences so then it all comes down to convenience but then it is more convenient to go upstream close instead of going across… I’m really just speculating and giving a definite answer.

I talked to Ulf [Anderson] as well and he kind of said a similar thing.

One of the things that I’m looking at is the policy, The Copenhagen Capacity, the Oresund committee, the Invest in Skane they all have these focuses that are all pretty similar. Were these chosen because clean-tech sounds really good to have or were there capabilities, were they building on a cluster or just political ‘sounded-good’?

Oresund committee was formed. That is?

I’m thinking more about the focus areas like clean-tech and IT and all that stuff. Because it sounds much better to have a clean-tech industry than an oil refinery. Where these built on capabilities or political ‘sounded-better’?

We had discussion on this science region Oresund. And this was decided, this is kind of off the record. This was decided over some beers in this tower room. It was me, it was Per Olof Berg he is now a professor of marketing at Stockholm University. He was the head of this institute and we were a couple of more guys. And he said … because he was telling the chairman of the Oresund committee about this XXX ‘we have a science region’ then later this chairman of course came back to Per-Olof and said ‘oh, that is a brilliant idea this science region, but we have to fill it with some content, you have to fix it.’ Per-olof back and we knocked back a couple of beers and we were discussing, that was for inspiration then [the beers’]. And Per-Olof said we need a symbol, so he basically drew this propeller, like a four leave clover but like propeller but with a XXX this is the sign of the XXX. ‘Alright, what are the strong scientific areas that we have?’ And one said, [s.] for jord til bord, from earth to table, all this agricultural. We are strong in agriculture science, that goes without saying, we have agricultural university in Herlev, you have the veterinarian university in Copenhagen it still existed then. And
the research base is really, really strong and recognized. It is label A, that was
growth from earth to table. Secondly, so we already had medicon valley establish so
number two is life sciences that goes without saying. And I was like ‘do we really need
to have four?’ ‘yeah we have to have four to have complexity but they have to be kind
of together.’ Then we discussed and we said ‘we know that we have some really, really
good developers in IT both at system level but also on application software level’. We
had the upcoming strong gaming development in Malmo, really, really strong previous
start ups like sigma, strong large companies that started in the region and we were just
about to start up with the IT university in Copenhagen. So all right IT that is the third.
And the we were going to come up with the fourth one and oh god. As be discussed,
back and forth, and someone just came up with ‘we should of course focus in the future
focus in the future on green tech and clean-tech environmental issues, so let’s call it
green tech’. And that was had nothing to do with what we actually had as competences
back then but we would like to build up. And then since it was then agricultural, good
sound, life sciences; really sound, clean-tech oh that is sound. Then we said the sound
region, the science region here are the focus areas. We sent them that, from the white
board and down to a table, sent it back to the Oresund Committee and they bought it
like that. XXX

So we did, today they call organizations like that think tanks. So basically we did
something XXX and we sent it back to the Oresund committee. And we served the
Oresund Committee with it, and these areas are now the basically something that we
came up with, three or four people in the tower room, three or four people in Nyhavn
over a couple of beers and it was creative and it was fun. You can’t imagine the joy of
being part of, because this was back in the 90s and then I was, not young but younger
feeling to be part of something. Because this religious atmosphere around the regional
development was still there. And we believe and we fought for and we worked night
and day and were out giving lectures and speeches and then Hans Kalle Bjorkman. He
was actually the chairman of SAMS as well. And it was at this level that he could call in
the morning to me in Copenhagen and he would say ‘Sven you need to suit up’ [story
about the good old days]… A lot of the things they talk about being long term strategic
political ambitions XXX. Hans Cavalli Bjorkman if anyone should have a statue over
the regional development. Everybody talks about Ilmar Reepalu ‘without him we
wouldn’t have a bridge’ nonsense. It was Hans Cavalli and Syd Svenske Kammerate,
without them we wouldn’t have a bridge. And the really, really strong managing
director of sydsvenska kammarat Stephan Muchler if you have met him? A really good friend, extremely important, always working in the dark and a brilliant lobbyist. A fantastic XXX. As in so many case there have been some visions of some key significant action that have been able with the means of really, really strong lobbyism to infuse working set ideas on decision making. So inception can be done, love that movie by the way. So it is really is, it was. We labelled the development as the regional development the case XXX the Oresund region mental constitution because if you have. You can have. When we talked about in class but the formation of networks they can have an organic formation or a generative formation and you could have policy driven formation. Do you remember that? [yes] XXX… And we talked about regional development formation of regions it comes back to me when we discuss and we talked about policy driven. That means that politicians come down and say ‘we need to do this’ and then create the XXX by building infrastructure, doing something that increases policies so that everybody is basically driven into this regionalization, that didn’t happen. Then you can have the generative, organic regional development where people start to work organically across the sound and the things just happen and policy makers ‘oh we can start formalizing some of the things here’. The Oresund regional development was none of the above. It was not a generative formation, it was not policy driven formation it was conceptual formation. Meaning that we create the concept of a region we believed in the region, we didn’t have the policies nothing happened form the generative legislation but we built a bridge. It was a totem we danced around like a bonfire. And some of us we believed in that so strongly so we talked about the Oresund region as if it existed. And a language philosopher would say if you talked about it enough it would happen. It is linguistically expressed and therefore it exists. And that is a matter of conception. And we wrote a lot about thing like that back then. [talk about Peter Borg Phd thesis].

So you have so many more patents in Sweden than Denmark. How important is Skane within Sweden in that, are they mainly coming from Stockholm or do you know that?

There is a cluster in Lund which is then closely related to the technological university of Lund. You have a lot of spin-of from that. How much that is in relation to the relative to the rest of Sweden I can’t tell you actually. That is really hard for me to tell. This is something that you would be able to find if you want to get the facts. I would say new
tech I believe they are still called that, they changed the name and reorganized that. It is a ministry in Denmark. […]

[story about his phd work with the point that infrastructure should be built around talent, not vice versa]

The patent and registration PRV patent och registering verket.

[interview ends]

XXX = sound momentarily lost.
Words removed:
One
Sense
Like
Still
Something
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Good
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Things
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Changes done in the program:
Rounder edges
Mostly vertical
Max words:30
Milk paints
Some variation

www.wordle.net

Some word have been changed to increase flow or due to poor quality of audio assumed by context. Furthermore some discussion that is not relevant to the subject, like small talk was taken out. These changes are though minimal and do not change the big picture.

The audio file can be provided upon request.
Appendix 06

Source: facebook.com (simple Google search rendered several findings)
### Appendix 07

#### Capital region of Denmark

<table>
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<tr>
<th>Industry</th>
<th>2007</th>
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<th>2007</th>
<th>change '92-'07</th>
<th>2007</th>
<th>change '92-'07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, hunting, fishing</td>
<td>0.2%</td>
<td>-16.6%</td>
<td>0.4%</td>
<td>11.4%</td>
<td>0.4%</td>
<td>-15.0%</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>0.0%</td>
<td>-40.5%</td>
<td>0.0%</td>
<td>-15.7%</td>
<td>0.0%</td>
<td>-11.0%</td>
</tr>
<tr>
<td>Food and Tobacco</td>
<td>0.6%</td>
<td>-32.5%</td>
<td>0.5%</td>
<td>-7.3%</td>
<td>0.9%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Textiles, Clothing and leather industry</td>
<td>0.6%</td>
<td>-7.8%</td>
<td>0.0%</td>
<td>-5.8%</td>
<td>0.0%</td>
<td>-6.3%</td>
</tr>
<tr>
<td>Wood, paper and graphic industry</td>
<td>1.0%</td>
<td>0.5%</td>
<td>0.2%</td>
<td>-5.6%</td>
<td>0.8%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Coal andignite, chemicals, rubber and plastics</td>
<td>2.3%</td>
<td>118.1%</td>
<td>0.7%</td>
<td>179.8%</td>
<td>1.1%</td>
<td>111.7%</td>
</tr>
<tr>
<td>Industry for the non-metallic mineral products</td>
<td>0.1%</td>
<td>-5.2%</td>
<td>0.2%</td>
<td>38.5%</td>
<td>0.3%</td>
<td>51.1%</td>
</tr>
<tr>
<td>Iron, metal and other manufacturing industry</td>
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<td>84.2%</td>
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<td>2.6%</td>
<td>94.0%</td>
</tr>
<tr>
<td>Electricity, gas, heating and hot water supply</td>
<td>0.9%</td>
<td>-4.5%</td>
<td>0.2%</td>
<td>-48.8%</td>
<td>1.0%</td>
<td>70.7%</td>
</tr>
<tr>
<td>Construction</td>
<td>2.2%</td>
<td>51.1%</td>
<td>3.5%</td>
<td>31.5%</td>
<td>1.7%</td>
<td>67.2%</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>8.6%</td>
<td>25.2%</td>
<td>2.2%</td>
<td>69.4%</td>
<td>3.8%</td>
<td>81.9%</td>
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<tr>
<td>Hotel and Restaurant Industry</td>
<td>0.9%</td>
<td>3.5%</td>
<td>0.2%</td>
<td>-5.8%</td>
<td>0.4%</td>
<td>97.8%</td>
</tr>
<tr>
<td>Transport, Travel, Post and telecommunications</td>
<td>7.7%</td>
<td>154.7%</td>
<td>1.0%</td>
<td>-8.7%</td>
<td>2.1%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Financial operations</td>
<td>6.7%</td>
<td>111.1%</td>
<td>0.7%</td>
<td>86.0%</td>
<td>0.6%</td>
<td>-12.2%</td>
</tr>
<tr>
<td>Real estate, business services, R&amp;D</td>
<td>13.0%</td>
<td>41.1%</td>
<td>3.2%</td>
<td>33.7%</td>
<td>7.0%</td>
<td>114.2%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>3.8%</td>
<td>23.8%</td>
<td>1.2%</td>
<td>6.7%</td>
<td>1.5%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Education</td>
<td>2.7%</td>
<td>26.8%</td>
<td>1.2%</td>
<td>30.6%</td>
<td>1.8%</td>
<td>51.5%</td>
</tr>
<tr>
<td>Health and medical care</td>
<td>5.2%</td>
<td>5.9%</td>
<td>2.3%</td>
<td>37.5%</td>
<td>3.2%</td>
<td>49.1%</td>
</tr>
<tr>
<td>Culture, leisure and recreation</td>
<td>3.0%</td>
<td>9.3%</td>
<td>0.6%</td>
<td>-4.8%</td>
<td>1.1%</td>
<td>77.7%</td>
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</table>

**GRP total**

<table>
<thead>
<tr>
<th>Region Zealand</th>
<th>Region Skane</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.7%</td>
<td>17.3%</td>
</tr>
<tr>
<td>30.1%</td>
<td>100.0%</td>
</tr>
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</table>

#### Capital region of Denmark

<table>
<thead>
<tr>
<th>Industry</th>
<th>2007</th>
<th>2007</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Mining</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Manufacturing, food, mineral and construction</td>
<td>5.5%</td>
<td>4.2%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Trade</td>
<td>86.8%</td>
<td>7.4%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Public sector, education and health care</td>
<td>11.7%</td>
<td>4.7%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Culture</td>
<td>8.0%</td>
<td>0.6%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

**GRP total**

<table>
<thead>
<tr>
<th>Region Zealand</th>
<th>Region Skane</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region Zealand</th>
<th>Region Skane</th>
<th>Region Skane</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.7%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

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### Appendix 08

<table>
<thead>
<tr>
<th>High Tech Manufacturing Industry</th>
<th>Oresund</th>
<th>Copenhagen</th>
<th>SW Skane</th>
<th>Stockholm</th>
<th>FA</th>
<th>Helsinki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceuticals, Medical Chemicals etc</td>
<td>2.82</td>
<td>3.46</td>
<td>1.55</td>
<td>2.85</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Office machines and computers</td>
<td>0.99</td>
<td>0.98</td>
<td>2.68</td>
<td>1.11</td>
<td>0.32</td>
<td></td>
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<tr>
<td>Electronic components</td>
<td>0.59</td>
<td>0.64</td>
<td>1.26</td>
<td>0.77</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>Radio and TV transmitters, line telephony and line telegraphy</td>
<td>0.11</td>
<td>0.13</td>
<td>0.17</td>
<td>1.75</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>Radio and TV tuners, sound recordings etc</td>
<td>0.62</td>
<td>0.65</td>
<td>0.11</td>
<td>0.28</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td>2.01</td>
<td>1.97</td>
<td>2.72</td>
<td>0.94</td>
<td>1.51</td>
<td></td>
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<tr>
<td>Measuring and navigation equipment</td>
<td>1</td>
<td>1.46</td>
<td>0.29</td>
<td>1.34</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Instruments for managing industrial processes</td>
<td>0.67</td>
<td>0.21</td>
<td>2.46</td>
<td>0.74</td>
<td>0.31</td>
<td></td>
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<tr>
<td>Optimal Instruments and photographic equipment</td>
<td>1.53</td>
<td>2.05</td>
<td>2.75</td>
<td>1.94</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>Clocks and Watches</td>
<td>0.47</td>
<td>0.73</td>
<td>0</td>
<td>1.07</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>Aircraft and spacecraft</td>
<td>0.45</td>
<td>0.79</td>
<td>0.12</td>
<td>0.98</td>
<td>1.65</td>
<td></td>
</tr>
</tbody>
</table>

### High tech service production

<table>
<thead>
<tr>
<th>Activity</th>
<th>Oresund</th>
<th>Copenhagen</th>
<th>SW Skane</th>
<th>Stockholm</th>
<th>FA</th>
<th>Helsinki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post and courier activities</td>
<td>1.08</td>
<td>1.25</td>
<td>1.08</td>
<td>1.07</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td>1.17</td>
<td>1.61</td>
<td>0.9</td>
<td>1.56</td>
<td>1.44</td>
<td></td>
</tr>
<tr>
<td>Consultancy regarding machinery</td>
<td>1.59</td>
<td>2.27</td>
<td>1.04</td>
<td>1.33</td>
<td>1.71</td>
<td></td>
</tr>
<tr>
<td>Consultancy regarding systems and software</td>
<td>1.23</td>
<td>1.61</td>
<td>1.89</td>
<td>2.12</td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>Data processing</td>
<td>0.88</td>
<td>1</td>
<td>0.74</td>
<td>1.61</td>
<td>3.41</td>
<td></td>
</tr>
<tr>
<td>Database operations</td>
<td>1.4</td>
<td>2.4</td>
<td>0.43</td>
<td>1.61</td>
<td>2.91</td>
<td></td>
</tr>
<tr>
<td>Maintenance and repair of computers in periperal equipment</td>
<td>0.88</td>
<td>1.29</td>
<td>0.57</td>
<td>0.81</td>
<td>2.58</td>
<td></td>
</tr>
<tr>
<td>Other computer-related operations</td>
<td>3.19</td>
<td>5.6</td>
<td>0.32</td>
<td>0.43</td>
<td>1.29</td>
<td></td>
</tr>
<tr>
<td>Scientific and technical R&amp;D</td>
<td>1.6</td>
<td>1.37</td>
<td>3.42</td>
<td>1.86</td>
<td>2.07</td>
<td></td>
</tr>
<tr>
<td>Social Science and humanities R&amp;D</td>
<td>1.6</td>
<td>2.71</td>
<td>0.91</td>
<td>2.02</td>
<td>2.22</td>
<td></td>
</tr>
</tbody>
</table>

| High tech manufacturing                        | 1.17    | 1.45       | 1.05     | 1.53      | 1.57|          |
| High tech services                             | 1.16    | 1.4         | 1.45     | 1.54      | 1.48|          |
| High tech total                               | 1.16    | 1.41       | 1.54     | 1.53      | 1.51|          |

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Appendix 09

Interview:

Inform the interviewee of the purpose of the study, it’s scope and why they were contacted. Furthermore how their responses will be used. Ask if they have any questions about it.

Inform them specially that the study is about „increased integration“ and changes that are caused by other factors such as globalization are not a part of this research.

People can say no to question, especially if they don’t feel that they have the required information.

H1. The human resource pool has integrated with an effect on both quality and quantity with increased integration.

- How would you describe the differences in the labour pool of Malmo and Copenhagen?
  - Strengths weaknesses?
  - Is there anything both lack?
  - What is being done?
- In what way has the Malmo supplemented Copenhagen?
- There is talk about labour shortages, what is being done to prevent these?
- How has it changed with increased integration?
- How do you believe it will change in future (e.g. next 10-20 years)?

H2. a) Physical resources remain unaffected by the increased integration.

b) Companies have used differences in factor conditions to locate facilities where it is most cost effective within the region.

- Read definition of physical resources:
  - „abundance, quality, accessibility and cost of nation’s land, water, mineral or timber deposits, hydroelectric power sources, fishing grounds, and other physical traits. Furthermore climate, location in relevance to others and time-zone“
- Do you believe these have changed?
- How about location in relevance to others? E.g. to Germany? Fehrman Broen?
- Has the value chain changed substantially with increased integration?
- Are industries still country-specific?
  - Is the integration incomplete that way?
H3. Knowledge resources have strengthened with collaboration between institutions and researchers.

- Have knowledge resources strengthened because of integration in regards to …
  - institutions
  - researchers
  - private companies
  - governance?
  - others and how?
- What has been done to increase them and what are the results?

H4. Cost of Capital has not improved due to the increased integration.

- Has there been a change in cost of capital? How?
  - Financial instruments
  - Something else?

H5. Infrastructure has improved in regards to transportation and housing stock but not in payment and health care.

- Has the payment been integrated somehow or benefitted from the increased integration?
  - Would euro help in relationship between the regions?
- Has the health care system been integrated somehow or benefitted from the increased integration?
- How has transportation infrastructure changed with increased integration?
  - Air
  - Land/car
  - Sea
- What are the effects on companies?

H6. Segments have gained options with the increased integration.

- There are evidence of companies moving across borders, are these
- Are there customers or segments that are being better served?
- Any segments more than others?

H7. Sophistication and demanding of buyers has not increased as a cause of the increased integration.

- Are consumers more demanding as a cause of integration?
- How and in which fields?
H8. Anticipatory buyer needs remain unchanged as caused by the increased integration.

- Have the needs changed because of increased integration?
- Are they more price sensitive?
- Definition of anticipatory needs.
- Do you believe the customers of the Öresund region are good anticipatory customers as a cause of the integration?

H9. Geographic scope of companies has changed to look at the entire region though companies’ structure and activities are mainly built around national borders.

- Do companies in the region set up their operations within the region and across borders?
  - Why? Upstream or Downstream?
- Has that changed?

H10. The value chain of companies is increasingly set up cross borders but within the region.

- Do companies set up the value chain differently, both inside the firm and between firms?
  - How?
  - Downstream?
  - Upstream?
  - Other?
- Have the networks changed?

H11. The increased integration has not affected national priorities.

- Have the governments of Sweden and Denmark changed their priorities because of integration?
- The governing bodies are putting emphasis on certain industries? Are they trying to pick winners?
- Or the society?
- Or other?

H12. Competition has increased with increased integration.

- Has competition increased because of increased integration?
  - How?
- How about inter-industry personal rivalry?

H13. New venture creation has increased with increased integration.
• Are there, in your opinion being options being utilized in new venture creation?
  o Why?

Other:

How does Malmo/Copenhagen benefit mostly from increased integration?

What changes do you think are the most important?

How do you see the region increase integration in the future?

What do you think is being done wrong?

Are there any big problems you can identify?

How interrelated are economies since they are parts of different countries?

Governance

Say how this can be portrayed in the report and get permission to do it that way.

**Questionnaire Sweden:**

Business climate:

• What challenges are in the local business climate
  o Legal environment
  o Taxes
  o Other costs
  o Cost of Living
  o Regulations and barriers
  o Lifestyles
• What advantages are deemed most important
  o Infrastructure
    ▪ Transportation
    ▪ Buracrasm
  o Skilled HR pool
  o Other
• What about support from governments

Value chain

• Are the suppliers present?
• In the different sectors?
• Anything that lacks?
  o Services
  o Suppliers
  o Capital
  o Other

International Awareness vs. external recognition

Most common challenges

Surprises positive or negative

How is cluster policy created

Why these sectors

• Capabilities at hand
• Political pressure

Innovation

• What are the measures and how do they compare
  o Patents
  o Employees
  o Other
• Are there measures being made?
• Why are Sweden so much higher than Denmark?
• How does Skane compare to national average?

Who would you say are the big champions of the region

• Have they been assisted ?

How is the region perceived abroad?

Does that match with reality or how Oresund/Malmo/Skane wants to be perceived
Appendix 10


Sub-Constructs of Factors: Human Resources (0.5), Transportation (0.3) & Business Environment (0.2)

Indicators of Human Resources: Access to Qualified Personnel (0.6), Local Sources of Personnel (0.4)

Each indicator gets a value (in this case random)

Access to Qualified Personnel (0.6): 4

Local Source of Personnel (0.4): 3

Human Resource therefore gets 3.6 (4*0.6 + 3*0.4)

As Human Resources contribute 0.5 it will contribute 1.8 to Factors (0.5*3.6) if other sub construct would get 3 the value of factors would be 3.3+

0.5*3.6 + 0.3*3 + 0.2*3 = 3.3
Figure 24 - The NCR model - Source: Arthurs, et al. (2009)

Table 3: NCR Model- constructs and sub-constructs with their weight

<table>
<thead>
<tr>
<th>Factors</th>
<th>Human Resources 0,50</th>
<th>Transportation 0,20</th>
<th>Business Climate 0,30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting Organizations</td>
<td>Innovation Support 0,25</td>
<td>Community Support 0,25</td>
<td>Suppliers 0,50</td>
</tr>
<tr>
<td>Competitive Environment</td>
<td>Local Activity 0,20</td>
<td>Film Capabilities 0,80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Significance</td>
<td>Critical Mass 0,50</td>
<td>Responsibility 0,15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reach 0,35</td>
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<tr>
<td></td>
<td>Dynamism</td>
<td>Innovation 0,35</td>
<td>Growth 0,65</td>
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<td></td>
<td></td>
<td>Identity 0,5</td>
<td>Linkages 0,5</td>
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</tbody>
</table>