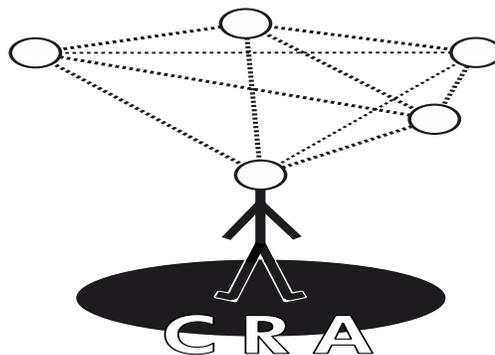


CRA

CENTRE FOR REGIONAL ANALYSIS

A tool for regional competitiveness



**Centre for Regional Analysis
School of Business, Economics and Law
Göteborg University**

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BACKGROUND

International and national context – Swedish perspective

The establishment of CRA is related to the Swedish membership in EU in 1995 and the increasing importance of regional issues at performance of the policy of EU. The membership meant that all the various institutions and actors of Sweden responsible for the development of the regions were brought together. This was a major breakthrough at the end of 1990's when Structural Funds Programmes were launched stimulating cooperation in new constellations. Sweden was involved in cross-border projects between countries both within and outside EU. By the fall of the wall Sweden could cooperate with countries in the Baltic region formerly controlled by the Sovietunion. A picture was painted showing satisfaction of the performance of the EU-programme in Sweden (Aalbu 2001). But the European cohesion policy tends to demand more cooperation to meet future challenges (SOU 2005).

An interpretation of this development is weakening of the National State linked to the introduction of new technologies such as ICT (Information and Communication Technology) that facilitate contacts across borders. Wider competence by the explosion of education may reduce the influence of established structures but support regions as power centres. This development is emphasized by the growth of regional consciousness and cross-border networks. In Sweden this stronger position of regions is reflected in the creation of the counties Scania and Västra Götaland, which are mergers of two respectively three counties.

In EU regions are important actors for the strengthening of the EU Commission in relation to the national states. For example, laws such as competition regulation politics can no longer be decided by the Swedish Parliament. Swedish regional policy is also affected by the joint-financing that depends on size and geographical area within which support is given. A consequence is that it is hard to perform a national regional policy that drastically differs from that of the EU.

In addition, the EU-policy of promoting regional power should be seen with regard to the location of governing and administrative activities in different countries. In this perspective Sweden is a unicentric country characterized by central governing. This hierarchical structure dates back to the foundation of the nation in the 16th century by King Gustav

Vasa and has been applied to a lot of activities (Ahnström 1973). A consequence is concentration of decision-making to the capital of Stockholm. Furthermore, changes of the Swedish settlement structure after World War II have been influenced by migration from country to city, from north to south and from periphery to centre. These changes should be seen in relation to the institutionalization of the welfare services organized by new and larger municipalities (Petersson 1991).

Otherwise, resources of forest, iron and waterfalls have been decisive factors for location and development of Swedish industries. At an early stage forest resources were used to provide fuel, in refining of iron and as a building material. Iron resources and the power of waterfalls have been used for processing of iron and timber enabling growth of competitive manufacturing niches. Furthermore, Swedish competitiveness is related to the configuration of the country with long distance from North to South. To overcome this distance has been a driving force in the development of transport solutions and systems for the transmission of power and messages, which has been a condition for the exploitation of raw materials in peripheral isolated areas far away from the markets (Sölvell et al 1991).

Thus, the physical resources and related manufacturing located to waterfalls shaped the Swedish settlement structure with activities located like islands in sparsely populated areas. With regard to the size of Sweden this "punctual" distribution of places becomes even more pronounced. The distance North-South is nearly 1 600 km and East-West 500 km and the land area is 410 000 km² of which 56 % is used for forestry and 6 % for agriculture. The population is 9,5 million that means few (23) inhabitants per km². But the density varies. The number of inhabitants in the County of Norrbotten in the North is 3, while this figure in the County of Scania in the South is 114 (incl. Malmö), in the County of Stockholm 321 (incl. the capital) and in the county of Västra Götaland 67 (incl. Göteborg) (Statistics Sweden 2013).

Another distinctive feature of Sweden is many large companies related to the early internationalization of Swedish industry (SNA 1993). This dependence on large international companies with headquarters mainly located to Stockholm has been strengthened by mergers. Growth of the private sector and expansion of knowledge-intensive production have favoured the position of Stockholm. This tendency is underlined by investments in infrastructure for transportation. In the

transport systems of railways, roads and air connections Stockholm is the main Swedish hub.

In this context the European policy to increase the competitive power of regions is a challenge. In Sweden the establishment of the self-governing regions of Scania and Västra Götaland exemplifies efforts to meet this challenge by increasing competitive power. The region Västra Götaland was created 1999 by merger of the counties of Göteborg and Bohus, Skaraborg and Älvsborg assigned to provide efficient, high quality health cares as well as promoting growth and sustainable development throughout Västra Götaland.

Regional context - Västra Götaland perspective

The number of inhabitants in the region Västra Götaland was 1,6 million in 2012 (Fakta Västra Götaland 2013). The region includes characteristic elements of all Sweden. Resource-oriented industries are found along the river of Göta Älv and other watercourses. In sparsely populated areas in the northern parts of the region waterfalls, iron and forest resources have created refining industries and shaped a spread “punctual” settlement structure. The location of the county at the west coast of Sweden has stimulated the development of trade and transport. Thus, Göteborg is a transport centre of Scandinavia based on its major role for international trade. The landscape at the northeast is dominated by agricultural areas surrounded by the largest Swedish lakes of Vänern and Vättern.

Historically a number of different profiles have evolved; trading, agriculture, forestry and manufacturing industries. These profiles play an important role in the business life of the county. Many and varied international contacts characterise the development and Göteborg is the most international city in terms of seaborne imports and exports. An international spirit with cutting-edge competence in areas like medicine, foodstuff, vehicles, interior design, chemistry, textiles and telecommunications has been developed. Besides, advanced educational and research programs performed at 6 Universities and University Colleges complement the business and public sectors (Västra Götaland County 2014-01-07).

The northern parts of the region borders on Norway and the county of Värmland. The northeastern parts borders on the county of Örebro,

while the counties of Jönköping and Halland are located south of Västra Götaland. This configuration enables cross-border cooperation that is especially pronounced within the sector of health and care. The location of the largest urban centre - Göteborg - close to the county of Halland enables cooperation in many fields such as infrastructure for transportation and integration of the labour markets. Along the border to Norway shopping centres have been established carried on the wish of Norwegian buyers to take advantage of differences in taxes, prices and exchange rates. Figure 1 shows the settlement structure and infrastructure for transportation of Västra Götaland.



Figure 1 Centres of the municipalities, railways and roads of Västra Götaland.

Source: Västra Götaland County (2014-01-07).

The distribution of the population varies a lot between the 49 municipalities; from 4 700 inhabitants in Dals-Ed to 526 000 in Göteborg, while the population density varies from 6 in Dals-Ed to 1175 per km² in Göteborg (Statistics Sweden 2014-01-08). These differences also refer to other fields such as labour market, infrastructure for transportation and accessibility to hospitals. But the differences between municipalities should also be seen with regard to the situation outside the region. For example, sparsely populated Dals-Ed is located in the periphery of Västra Götaland but close to some of the most dynamic Norwegian labour markets. This variety means different opinions of what efforts should be made to increase the competitiveness of Västra Götaland.

Administrative context - Västra Götaland perspective

Västra Götaland county was established on 1 January 1998 by joining of the counties of Göteborg and Bohus, Skaraborg and Älvsborg that had been in use since 17th century. The joining of the counties was performed for the creation of a more efficient administration of the county's public services. The *County Administrative Board* represents together with other state bodies national interest in the county. On the other hand, *Västra Götaland Region* formed 1st of January 1999, is responsible for many other activities such as health services and regional development. Furthermore, the 49 *municipalities of the region* are responsible for schools, old-age care and technical administration. They cooperate in four associations of local authorities. The *Regional Council* and the local authorities are both entitled to levy taxes in order to finance their activities (Västra Götaland County 2014-01-07, Västra Götalandsregionen 2014-01-08, Västra Götaland 2005).

Historically Västra Götaland has been a meeting place for entrepreneurs engaged in trade all over the world. Waves of growth of international corporations and birth of innovations have swept the region such as from shipbuilding to automotive industry and from textile industry to design and fashion. Knowledge-intensive companies within e.g. environmental engineering, biomedicine, IT and the experience economy continue to sprout up along with the creation of corporate clusters. Västra Götaland also plays a key role as hub for transport in the Nordic region and is one of Scandinavia's most popular tourist destinations. Furthermore, the creation of Västra Götaland in 1999 was justified by the assignment to provide high quality

healthcare as well as promoting growth and sustainable development of the region (Region Västra Götaland 2011).

In Västra Götaland the overall responsibility of issues concerning regional development is delegated to the *Regional Development Secretariat*. Fields of activities include Infrastructure, Trade and Industry and Research and Development (R&D). Thus, Region Västra Götaland works to improve traffic systems, IT networks and public transport enabling for the citizens to reach other places inside and outside the region. Within the area of trade and industry the Region Västra Götaland works for example with developing entrepreneurship, supporting innovations and providing financing of different kinds to support companies. In European context Västra Götaland tops the ranking concerning investment in R&D in the field of trade and industry. In this case an important issue for Västra Götaland is to stimulate R&D cooperation between companies and institutions of higher education (Västra Götalandsregionen 2013-10-12).

To handle these issues the Regional Development Secretariat drive and support the development in the region of the following areas:

- Business, Industry and Trade
- Research & Development and Education
- Infrastructure and ICT
- External Relations and International Coordination
- EU Programmes and EU Funding
- Analysis and Evaluation (Västra Götalandsregionen 2014-01-09a, b, c, d, e, f).

Thus, the operation of this mission includes many activities. CRA is mainly linked to the area of Analysis and Evaluation with special attention paid to analysis of development trends, provision of relevant basic facts and assessment of regional contribution to development.

CREATION OF CRA

Driving forces

This overview points to some factors as driving forces for the creation of CRA. By the Swedish membership of EU in 1995 the scene for regional policy changed. The national aims of the regional policy

should be coordinated with the European aims stressing cooperation and cross-border issues. For example, widening administrative borders by shaping functional regions is a way to increase regional competitiveness. Thus, the joining of the counties of Göteborg and Bohus, Skaraborg and Älvsborg to form the county and the region of Västra Götaland confirm the approach of the regional policy of EU. This development demands more knowledge of the competitive ability of regions.

The traditional unicentric structure of Sweden characterized by concentration of decision-making to Stockholm is challenged by more influence by the regions. Attention should be paid to the tendency to concentrate people and activities emphasized by the migration from country to city, from north to south and from periphery to centre. This development on the national level has favoured the position of Stockholm. But has also influenced the aims of the Swedish regional policy. Efforts have been made to counteract the dominant role of Stockholm. Thereby, the European policy to increase the competitive power of regions follows Swedish aims to decentralise functions from Stockholm. The establishment of the regions of Scania and Västra Götaland exemplifies these efforts to decentralize decision-making that former was made by the state.

The geographical prerequisites of Västra Götaland are similar to characteristic elements of all Sweden even if some profiles are identified such as activities related to trade and transport. A number of profiles have evolved. Göteborg is the most international city in Sweden in terms of seaborne imports and exports. In addition, the shaping of Västra Götaland in 1999 was justified by the assignment to provide high quality healthcare. Another justification was to promote growth and sustainable development. In the north of Västra Götaland the border to Norway needs special observation. Along the border shopping centres have been established reflecting the wish and ability of Norwegian buyers to take advantage of low Swedish prices. Thus, changes of the economy in Norway influence the development of Västra Götaland and may facilitate integration of labour markets and cross-border activities.

At the creation of CRA (Centre for Regional Analysis) in 2006 attention was paid to analyse the prerequisites of Västra Götaland to compete in Sweden and abroad. This approach also refers to studies performed within the research group of ICT (Information and Communication

Technology) established in 1997. These studies focused the geographical impact of ICT-use, that was seen as a tool to counteract tendencies towards regional imbalances. The research group of ICT was a forerunner to the research group of CRA created in 2007 even if this group mainly was a consequence of the foundation of CRA in 2006.

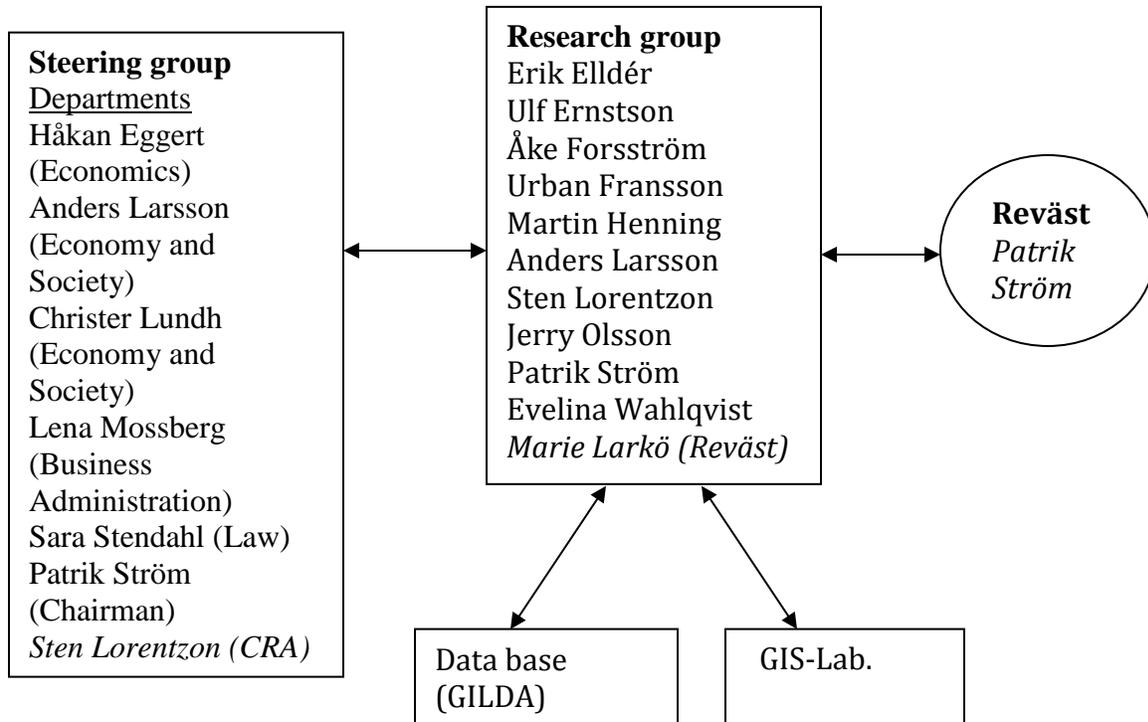
Purpose and organisation of CRA

The establishment of CRA is in accordance with the strive to satisfy the demand for more regional knowledge. In the introductory phase of CRA high priority was given to identify profiles of competence and knowledge of clusters. The creation of CRA was funded by the Region Västra Götaland, the Foundation of Economic Research of West Sweden and School of Business, Economics and Law at Göteborg University. The Region Västra Götaland has played a main role for the development of CRA both as actor initiating projects and as contributor to other studies of the competitive ability of Västra Götaland.

The purpose of CRA is to supply knowledge of different issues of local and regional prerequisites for the competitiveness of Västra Götaland. Furthermore, the purpose is to increase the knowledge of in what way the competitiveness of Västra Götaland is influenced by changes within the region and changes of the environment. More knowledge of these changes will facilitate the choice of priorities at decisions related to the aims of the Swedish national growth program. Programs and efforts made within the program of regional development need support of facts and qualified analysis of complex interrelationships characterising successful regions.

CRA was up to July 2013 organised in a research group that was linked to the data base GILDA (Geographical Individual Longitudinal Database for Analysis) and a GIS-Lab at the School of Business, Economics and Law at Göteborg University. First of July 2013 CRA was extended with a steering group. Furthermore Reväst, which is a regional contact net and forum for information to strengthen the links between actors focusing the labour market and the development of the society, formally became connected to CRA. The organizational structure of CRA is shown in the figure below.

CRA/STRUCTURE



The *steering group* represents all disciplines of the School and is composed of people within business administration, economics, economic history, economic geography, human geography and statistics at the departments of the School: Business Administration, Economics, Economy and Society and Law.

Members of the *research group* focus the conditions for regional development abroad, in Sweden and especially Västra Götaland. The relations to the external environment is highlighted. The research profiles of the CRA-members are:

Erik Elldér – PhD-student; GIS and accessibility

Ulf Ernstson - PhD; environmental issues

Åke Forsström – prof. em; transport- and traffic issues

Urban Fransson – assoc. prof; analysis of changing settlement structures

Martin Henning – assoc. prof; regional economic transformation

Anders Larsson – PhD; structural changes of regions producing vehicles

Sten Lorentzon – prof. em; settlement structures and labour markets – infrastructure for transport and communication
Jerry Olsson – PhD; logistical solutions for transportation companies
Patrik Ström – assoc. prof; the geography of services – international comparisons
Evelina Wahlqvist – PhD-student; cultural economy and regional development.

The research is based on data of population, industries and public services related to specific places. These data are available in the *data base GILDA* (Geographical Individual Longitudinal Database for Analysis) at the School of Business, Economics and Law and used for analysis of the competitiveness of Västra Götaland. Another resource of CRA is the *GIS-Lab* directed to production of maps for illustration of results of performed studies.

The structure of CRA also comprises cooperation with *Reväst* enabling contacts to actors in West Sweden interested in research at CRA but work outside “the academy”. Other assignments of Reväst are to develop research competence in regional science and connect researchers and users of results of studies carried out in West Sweden. Members of Reväst are active in issues of regional development in the counties of Västra Götaland, Halland and Värmland.

STUDIES AND PROJECTS PERFORMED BY CRA

The research group of CRA is involved in studies focusing different aspects of regional competitiveness, which is illustrated of the list of studies carried out of CRA in 2013 (see appendix 1).

The overview of studies in appendix 1 shows some research profiles such as the focus of changing labour markets related to competence (skills), the ability to bridge the knowledge-gap between old and new industries, the mobility of qualified individuals between related industries and prerequisites for creation of new businesses. But the studies carried out by CRA during the period 2006 – 2013 have dealt with more regional issues which is seen from the list of projects in appendix 2.

Studies and related projects have mainly been accomplished by members of the research group of CRA. But in some cases the studies

have included cooperation with representatives of other disciplines enabling appropriate approaches of the studies. CRA was created during a built-up period of 3 years. This period covered studies of many regional issues such as identification of industrial clusters and the competitiveness of Västra Götaland with regard to creativity and location. The cooperation between Region Västra Götaland and CRA at using the data base GILDA for analysis of regional issues was also developed.

Some studies have included operative participation. Thus, the most intensive work has been related to the efforts made by Region Västra Götaland to implement the program “Vision Västra Götaland”¹. These studies paid special attention to the creation of an index to measure a good life. This work meant discussion of results with a “panel” comprising representatives of activities from the private and public sectors. Another project based on cooperation with Västra Götaland concerned the shaping of an Atlas of accessibility. The data base GILDA has been a key factor to realize these studies; the Creation of CRA, the Vision and the Atlas of Västra Götaland. The budget of these projects was 8 million Swedish Crowns of which the Region Västra Götaland sponsored 75 percent (6 million).

In addition Region Västra Götaland has been sponsor to other studies such as production of statistics between southern Norway and northern parts of West Sweden at analysing the possibilities to promote the competitive power of this border-area. Furthermore, the issue how settlement structures, labour markets and infrastructure for railway and broadband influence the competitiveness of Västra Götaland is analysed. Västra Götaland is also the main sponsor enabling treatment of data based in GILDA as a tool to accomplish regional studies.

Another issue concerns the Geography of Creativity 3T implemented by cooperation with the research group of R. Florida and sponsored by the Foundation of Economic Research of West Sweden. In addition studies

¹ “Vision Västra Götaland – A good life” is a vision for the development of Västra Götaland. “A good life” is defined as: Good health, Work and education opportunities, Safety, a spirit of community and participation in community life, A good environment protecting the renewable systems – in nature, housing and working life, Meeting the needs of children and the young, Sustainable growth, generating resources for everyone, and a rich cultural life (Västra Götaland 2005).

of connections between educational programs at universities and regional development have been supported by cooperation between Faculty of Arts, School of Business, Economics and Law at University of Göteborg and Region Västra Götaland. Altogether Region Västra Götaland has sponsored more than half of the total amount of 16 million Swedish Crowns at financing studies carried out by CRA during the period 2006 – 2013. Corresponding share of the Foundation of Economic Research of West Sweden is 25 percent.

A further aspect is the demand of the competence built up by the members of the research group of CRA. This demand refers to participation in CRA-projects. In these cases the ability to use the database GILDA plays a key role. For example, information in GILDA is used in dissertations and in scientific articles. Therefore, the activities of CRA are partly linked to resources connected to persons holding positions “outside” CRA. This attendance is hard to calculate even if the transformation to full-time jobs gives a hint. Thus, the participation of members of the CRA research group during the period 2008 – 2012 varies between 195 and 420 percent (1,95 and 4,20 jobs) of full-time jobs.

The tendency is more work feasible by persons who have permanent position in comparison to persons who have temporary position in projects. In 2008, 2009 and 2010 work financed in different ways “outside” CRA was 0 percent, while this share was 245 percent in 2011 and 230 percent in 2012. Independent of the kind of financial support the full time shares were 275 in 2008, 195 in 2009, 235 in 2010, 420 in 2011 and 385 in 2012. This indicates more people attending CRA-activities and that the financial sources of CRA are more extensive than project based sponsoring. This broad approach is verified by the list of publications. See appendix 3.

PARTNERSHIPS AND NETWORKS

Local and regional partnerships

The Research Group is tied to CRA that was created in partnership with the Region of Västra Götaland during spring 2006. The purpose of CRA is to supply knowledge of different issues of local and regional prerequisites for the competitiveness of Västra Götaland. Furthermore, the purpose is to increase the knowledge of in what way the competitiveness of Västra Götaland is influenced by changes within the region and changes of the environment. A main issue is if there are any specific factors enabling the location of activities and attracting people to specific urban areas and regions. Another issue concerns how different actors (e.g. politicians, businessmen, academics) interact and thereby may contribute to urban and regional development. This interplay of knowledge processing imply a strategic position of the human being influencing regional competitiveness. Thus the work of the CRA Research Group is performed by contacts to representatives of different authorities and organisations such as:

- Municipalities of Västra Götaland,
- Region Västra Götaland,
- Universities and Research Institutes,
- Center for Regional and Urban Studies.

International partners and networks

The international contacts are mainly related to networks within Europe. The Group participates in the 6th framework project EURODITE with more than 20 different departments around Europe. The aim is to analyse the relationship between the knowledge based economy and regional development through comparative innovation studies. One central theme is the role of city-regions in innovation and economic development. In the case of Västra Götaland, the automotive sector and the role of new knowledge-based clusters and proximity (Lindholmen Science Park) is studied. Partners are:

- Institute for Work and Technology, Gelsenkirchen. Germany,
- Department of Geography, University of Marburg, Germany,
- Center for Regional and Urban Studies. University of Birmingham. UK,
- Centro de Estudos Geográficos da Universidade de Lisboa, Portugal.

Besides, the location of Västra Götaland with borders to Norway, makes the European INTERREG-program of special interest. Thus networks are established to representatives of:

- Östfold Fylke
- Västra Götaland, based on support of the European Union, enabling studies of the integration of the Norwegian and Swedish labour markets.

Furthermore the studies are presented and discussed in international research groups:

- IGU/Global Information Society,
- Digital Communities, Urban & regional Planning Program, Department of Geography, East Lansing, Michigan,
- RESER (European Association for Research in the Service Industry).

APPENDIX 1: STUDIES CARRIED OUT BY CRA DURING 2013

Bridging the knowledge-gap between the old and the new: the case of tourism innovation processes in Västra Götaland region

In spite of a growing awareness of the importance of tourism in regional economic growth, it has until recently not been identified as an economic sector per se. Consequently, in many regions, tourism has been treated as separated from the traditional manufacturing based economic activity. This division might create a technological, institutional and cognitive gap between traditional and new sectors and hence missed opportunities to re-cycle and combine knowledge and innovation in regional tourism development. The aim of this study is to analyse the possibilities and limitations for innovation based on combination of knowledge between traditional and new sectors of the economy. **Participants:** Anders Larsson and Kristina Lindström. **Funded** by Foundation of Economic Research of West Sweden. **Research period:** 2011 –

Relatedness and regional changes in an historical perspective

One of the most important links between economic activities today is their relatedness with regard to competence (skills). This relatedness may influence many economic phenomena, e.g. individual career, regional diversification and structural changes. But there are many different types of links between economic activities, not least historical, depending on what resources that are observed. The aim of this study is to attain more knowledge of the connection with different types of relatedness and regional economic transformation in an historical perspective. The study is based on recent digitalized data of economic activity in Swedish towns 1900 – 1965 and American data of the US census 1900. Preliminary the results indicate that the path dependence in the economic transformation was evident also after the industrial revolution, especially within traditional industries. After 1930 common human resources have become more important for the advantages of co-location and transformation and traditional regional structures of clusters have partly been replaced by another type of dynamic development. Furthermore, the study also add knowledge to our time. **Participants:** Martin Henning. **Funded** by the Foundation of Jan Wallander and Tom Hedelius. **Research period:** 2010 –

The mobility of the manpower in the car industry related to regions and industrial sectors

Technological inventions and fast technological changes have characterized the development of the global car industry. In recent years, however, this sector has become more known for organizational and financial turbulence. Many employees have been forced to move. This mobility of qualified individuals between related industries is an important mechanism behind regional processes of diversification and the development of regional economies. By the use of microdata of individuals, who have worked in the Swedish car industry between the years 1990 and 2010, the employees that quit the car industry are analysed concerning industry and where they prefer to work. The studies also include analysis of relevant characteristics of individuals that move to other workplaces. **Participants:** Martin Henning, Anders Larsson and Urban Fransson. **Funded** by the Foundation of Jan Wallander and Tom Hedelius. **Research period:** 2010 –

Analysis of accessibility to commercial services in sparsely populated areas

More private motorism has enabled high mobility by individuals living in different types of regions such as metropolitan areas and sparsely populated areas. People living in sparsely populated areas can commute long distances without traffic congestion. This means that many individuals combine work-trips with services, e. g .visiting stores and banks. Thereby the accessibility to these services is better for individuals who have access to car and travel regularly than the accessibility for persons living in areas missing functional links to areas outside their neighbourhood. The extent of commuting and potential points of supply of commercial services are analysed as well as accessibility to commercial services for the non-commuting group. **Participants:** Ulf Ernstson and Anders Larsson. **Funded** by VGR. **Research period** 2011 –

Commuters from- to- and in the municipality of Kungälv

This is an explorative study and carried out by the use of data from the database GILDA (Geographical Longitudinal Database for Analysis). **Participants:** Ulf Ernstson and Urban Fransson. **Funded** by the Municipality of Kungälv and CRA. **Research period** 2011 – 2013.

Differences of ages among couples and synchronized retirement

This project pays attention to the importance of different ages for the time of retirement among married men and women in Sweden. Furthermore, the variation of ages is related to socio-economic conditions. **Participants:** Urban Fransson and Per Gustafson
Funded by FAS **Research period** 2011 – 2014.

On Distance and the Spatial Dimension in the Definition of Internal Migration.

This project focuses on the spatial dimension where migration is typically defined as movement across administrative borders. Using data for all internal migrants in Sweden, the only known country where migration distances are available in sufficient detail, studies are performed of actual migration distances and the relationship between actual migration distances and migration-defining boundaries. **Participants:** Urban Fransson and Thomas Niedomysl. **Funded** by CRA. **Research period:** 2011 – 2013.

IT-entrepreneurs in Västra Götaland

The performance of this study is based on the database GILDA (Geographical Longitudinal Database for Analysis). One purpose is to investigate the possibilities to identify entrepreneurs creating new businesses, while another purpose is to investigate the ability of the database GILDA to identify businesses that are closed down. The studies observe the development in Västra Götaland as well as all Sweden during the period 2005 – 2010. **Participants:** Urban Fransson. **Funded** by CRA. **Research period:** 2012 – 2013.

More efficient urban transport systems – optimal location of combi-terminals in and around the city of Gothenburg

The work is based on the observation that Swedish traffic on roads and in towns tends to become inefficient as the size of the delivered goods decreases while the distance of transportation increases. A consequence is burden on the urban transport system; the capacity of the infrastructure decreases, while congestion and pollution increase. The aim of the study is, with regard to the location of present and future combi-terminals, to investigate the potential of more efficient use of existent urban transport systems. The survey focuses the city of Gothenburg and surroundings. **Participants:** Jerry Olsson. **Funded** by.... **Research period:** 2012 – 2014.

APPENDIX 2: CRA-PROJECTS 2006-2013 WITH MARKING OF SPONSOR

Year/Project	Sponsor
2006: <i>The creation</i> (built-up period of 3 Years)	VGR (Region Västra Götaland) Foundation of Economic Research of West Sweden Department of Human Geography
.....	
2007: <i>Grensestatistik</i> <i>Kreativitetens Geografi 3T</i>	VGR Foundation of Economic Research of West Sweden
<i>Uppföljning av Vision Västra Götaland</i>	Panel/VGR
.....	
2008: <i>Kreativitetens Geografi 3T</i>	Foundation of Economic Research of West Sweden
<i>Testning av indikatorer inom projektet "Uppföljning av Vision Västra Götaland"</i>	Panel/VGR
<i>Förtydligande av index och indikatorer inom projektet "Uppföljning av Vision Västra Götaland"</i>	Panel VGR
<i>Samband mellan högre konstutbildningar och regional utveckling</i>	Konstnärliga fakultetskansliet, Handelshögskolan, Stiftelsen för framtidens kultur, VGR; Regionutvecklingsnämnden VGR: Kulturnämnden
<i>Ortsstruktur, arbetsmarknader och järnvägar</i>	VGR
<i>Mätning av index och indikatorer inom projektet "Uppföljning av Vision Västra Götaland"</i>	Panel/VGR

Year/Project	Funded by
2009:	
<i>Centrum för Regional Analys</i>	VGR
<i>Tillgänglighetsmodell för kollektiv- och bilresor i Västra Götaland</i>	VGR, Department of Human and Economic Geography.
<i>Från industriregioner till upplevelseterritorier</i>	Foundation of Economic Research of West Sweden
.....	
2010:	
<i>Samarbetsavtal om uppföljning av Vision Västra Götaland</i>	VGR
<i>Analys av utpendling från Kungsbacka kommun</i>	Kungsbacka kommun
.....	
2011:	
<i>Verksamhetsbidrag</i>	VGR
<i>Analys av tillgänglighet till kommersiella tjänster i glesbygd</i>	Tillväxtverket
<i>Sustainable Transport Initiative</i>	VINNOVA
.....	
2012:	
<i>Verksamhetsbidrag</i>	VGR
<i>Åldersskillnader i parförhållanden och synkroniserad pensionering</i>	FAS
<i>Sustainable Transport Initiative</i>	VINNOVA
.....	
2013:	
<i>Verksamhetsbidrag</i>	VGR
<i>Freight distribution in the city</i>	Göteborgs universitet/VINNOVA
<i>Sustainable port region: the case of Gothenburg, Sweden</i>	Stift. Ek. Forskn. i Västsverige
<i>Intensifierad rumslig interaktion mellan landsbygd-stad i Globala Syd: långväga rörlighetsförändringar och kvinnors möjligheter att delta på arbetsmarknaden över tid</i>	FAS

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