ON LOCATIONS OF CALL CENTRES
An Illustration from Two Rural Regions in Sweden and Finland

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Abstract: Call centres are a key business form in the modern information society. Call centres, based on e-work, allow flexibility in space concerning organisational locations. The long-term aim of our study is to understand factors behind establishments, locations and continued existence of call centres, and this paper is one step in this process. The paper illustrates call centre locations in two rural regions, Ljusdal in Sweden and Kuusamo in Finland. In the analysis we use a model for call centre location, based on our earlier studies in the field. The model consists of five factors that affect call centre location, or relocation, in a specific region; Business Environment and Community Related Factors, Communications and Organisation Related Considerations, Market Existence and Access, Resource Availability and Entrepreneurship. The paper illustrates how two regions give different prerequisites for call centre location.

Key words: call centre, contact centre, cluster, location, regional development, outsourcing.

1. INTRODUCTION

As infrastructure for information and communication technology develops and for strategic purposes or in order to reduce costs, organisations organise around smaller units and workplaces geographically distant from a main workplace, i.e. distance work or e-work. An increased application of e-work, i.e. an information based activity which use information and communication technology, leads to an increased mobility and geographically independent organisations emerge. A call centre is here regarded a cost effective organisational form for certain types of e-work services. An increased mobility means at first hand that competition increases within a specific country regarding call centre locations. Nationally there is a tension between urban and rural districts. Often a political agreement prevails concerning job creation and regional development and here peripheral or less favourable areas are especially targeted. Today, an international competition for call centre locations is also emerging. The national tension may therefore be extended to also include cross-border tensions between different nations in the world. From this background it is important to understand why organisations chose a specific location and why establishments remain in this chosen location. The long-term aim of our research is to understand factors behind the establishment, location, and continued existence of call centres. This paper is a step towards a comprehensive understanding of call centres that have a high viability and how that is related to their location in a certain region. We use our earlier studies as a basis for our analysis and a model for call centre location is applied to two rural regions - Ljusdal in Sweden and Kuusamo in Finland. We use the model to illustrate call centre locations in a specific region. Then we point at some results from call centre locations and call centre development in our regions.

In this paper we will use the concept call centre and we will not distinguish it from contact centres. It is defined as:

> "an organisation or a unit, located at a geographical distance from its customers and/or principals, that handles inbound or outbound calls in order to answer questions from customers or clients or in order to gather information for a certain activity. Communication with customers includes the use of telephones as well as modern communication media, such as e-mail and chat. Further, call centre activities can be performed either in-house, which refers to services that are provided internally within an organisation, or outsourced, which means that the call centre attends to other organisation's tasks." *(Stoltz, 2004 and Moberg et al., 2004).*

2. METHOD

The Swedish illustration is mainly based on the case of Ljusdal, closer reported in our earlier studies (Moberg et al., 2001a, Moberg et al., 2001b and Stoltz, 2004). The study is based on visits and contacts made during the time period 2001 to 2004. During spring 2001 we conducted 17 face-to-face interviews with 18 different interviewees - mainly managers of Ljusdal's call centre organisations. These interviews were semi-structured with open questions where the respondents were encouraged to talk freely about their organisation and especially its history and development. Elements of the study are also a part of a larger European Union project, EMERGENCE[9]. Continuous contacts from 2001 to 2004 with representatives for Ljusdal's call centres and the municipality has provided us with further information and it also means that we have kept ourselves updated with the development in the region.

The case of Ljusdal forms the empirical basis for our development of the model for call centre location (Moberg et al., 2004) that we use in this paper. In order to explore regional as well as nation differences we have chosen to complement our study with one further region - Kuusamo in Finland. We wanted to study a region located in a country with similar information and communication technology maturity as Sweden, a region that has similar demographical characteristics as Ljusdal in terms of number of inhabitants and classification as a rural region and also is a region that hosts a relatively high share of call centre work opportunities. The case of Kuusamo is based on three telephone interviews conducted in November 2001, two telephone interviews conducted in April 2004 and one official report (Tikkanen and Korpela, 2001) on call centres located in the region. Both cases have also benefited from use of secondary data in the form of statistics, www-sites, newspaper articles and other research papers. For the general discussion about Sweden, we have for instance used our previous research regarded geographically dispersed organisations (cf. Moberg, 1993 and NUTEK, 1993).

3. A MODEL FOR CALL CENTRE LOCATION

In our earlier paper (Moberg et al., 2004) we introduce a model to structure the complex patterns with many interactions affecting call centre location, or relocation, in a specific region. We classified these factors according to five overall factors, i.e. Market Existence and Access, Communication and Organisation Related Considerations, Business Environment and Community Related Factors, Resource Availability and Entrepreneurship, that act on society level, municipal level, organisational level as well as individual level. A brief description follows below. For a detailed presentation see Moberg et al. (2004).

Market Existence and Access concerns the existence of a sales market and where that market is geographically located in relation to a specific call

[9] Estimation and Mapping of Employment Relocation in a Global Economy in the New Communications Environment. More information about this project can be obtained at <www.emergence.nu>.

centre establishment. Geographically independent work, or e-work, means different business circumstances compared to many manufacturing organisations and also compared to more traditional service organisations such as hairdressers, restaurants and repair shops. The most important difference is that e-work organisations such as call centres are not dependent on a local market in the same way as their products and services can relatively easily and quickly be transported at a low cost over long distances. The factor also concerns aspects related to access to customers, niche development, innovations and market conditions (i.e. boom or slump).

Possibilities for changing organisational structures in the form of relocation of or outsourcing of business activities due to development of communication infrastructure for both physical and information based transportation is dealt with in *Communications and Organisation Related Considerations.* Along with increased use of information and communication technology it is not unusual that (larger) organisations, for purposes of rationalisation, relocate or outsource parts of their business activities from city areas to more peripheral areas. Non-traditional ways of structuring and organising businesses will have an affect on the establishment potential, of geographically independent operations such as call centres, in smaller localities and sparsely populated areas.

Business Environment and Community Related Factors emphasises the local business environment and existence of social networks as a basis for stimulating new business establishments and location, or relocation, of call centre activities to a specific area. Actions taken by different regional actors to develop the local business climate for call centre businesses are also included. The factor involves many different aspects related to the local business environment in a delimited region; *demography* - number of inhabitants, population density, age structure etc., *industry structure* - shifts in the local industry, percentage of total work opportunities in the region etc., *the local business climate* and *political support* - especially from public or semi-public agents. Also, *tradition and predecessors* tend to have an important effect on the extent of new business formation in and location, or relocation, to a specific region. Different *support services* for small organisations can also positively stimulate the local business environment. Other business environment and community related factors are *education and training programmes* and *living environment,* i.e. housing, child-care, travelling time to work, safety, closeness to nature etc, in the region.

Resource availability concerns access to various resources determining the prospects of establishing and locating, or relocating, call centres to a specific region. The resources are of various kinds. They can be material, such as available *premises* and access to *equipment* such as computers and information and communication network. They can also be *financial* such as access to start-up capital/risk capital or possibilities to get subsidies. Another type of resource is *competence,* i.e. available competent workforce, expert knowledge, language skills, social skills, personal contact network etc. Low entry barriers to new business formation for call centres in terms of capital, premises and other requirements, facilitate locations and relocations of call centres to a much greater compared to the manufacturing sector. Information based business services provide intangible products, often embodied in experienced individuals. The expertise is not tied strongly to that of the organisation and knowledge is therefore highly mobile. Coupled with low entry barriers this enables individuals to leave established organisations to set up new operations. With access to resources such as laid-off competent personnel and available premises with certain equipment, a new call centre organisation can be started up relatively quickly.

Individual initiatives taken by people working in or who are on their way to start up call centre activities as well as people from local authorities, so-called social entrepreneurs, are considered in *Entrepreneurship.* Many researchers emphasise individual's intrinsic motives and abilities as an explanatory criterion for new business formation and location, or relocation, of business activities in a specific region. The motives can be characterised as career or coercion. Career involves the entrepreneur's own ambitions as a driving force, i.e. he or she wants to make a career, but also his or her attachment to a certain region, for example in the form of investments, networks and predecessors. The basis for coercion is that external circumstances force people to start up their own business in order to make some kind of livelihood in a specific locality. Coercion and career are different sides of the same coin where the first is a push factor while the second is a pull factor. Both stimulate business dynamics in a specific region in form of location or relocation. A high level of business dynamics within a delimited geographical area facilitates enterprise of call centres.

4. CALL CENTRE LOCATIONS IN SWEDEN AND FINLAND

In the service sector call centres have asserted themselves as con the market and expanding. As far as Sweden and Finland is concerned, there is a lack of reliable statistics on the number of job opportunities offered in call centres. In a government-instigated study in 1999 ISA[10] estimated that there were about 33,000 full-time jobs in Swedish call centres (SOU, 1999). Of these about 8,000 people worked in call centre organisations dealing with outsourced assignments from other organisations. The number of job opportunities in Swedish call centre was estimated to have grown to 50,000 by the end of 2001 and to 60,000 by the end of 2002.[11] We have no corresponding figures for Finland. An investigation by Federation of European Direct Marketing estimated the total number of employees in Finnish call centres to be between 6,600 and 8,000 or about 0.4 percent of the active population by the end of 2000 (Eurocallcentre, 2001). Another indication of the number of call centre jobs in Finland could be the number of members in the Help Desk Nordic Institute. Finland had in 2001 some 90 members whereas Sweden had 200 and Norway had 100.[12] Using these figures to calculate call centre employees in each country gives that Finland had about 22,500 employees in relation to Sweden's 50,000 by the end of 2001. If Finland then continued their call centre development during 2002 at the same pace as Sweden, they had about 27,000 call centre work opportunities compared to Sweden's 60,000 by the end of 2002. Using these figures of call centre job opportunities in respectively country to calculate the percentage of all work opportunities, call centre jobs represent 1.4 percent in Sweden and 1.0 percent in Finland.[13] These figures can be compared to 2.2 percent in United Kingdom, which is the largest call centre market in Europe, and an European Union average of 1.2 percent (Datamonitor, 2002). There seems to be a significant variation in the definition of call centre activities in both Sweden and Finland (compare Stoltz and Moberg, 2004). Regardless of the exact number of work opportunities offered, call centres are important business activities in both Sweden and Finland and this is especially valid for peripheral or rural areas.

Sweden has during the last years seen a growing demand from the *market* for call centre activities. According to ISA (2001, 2002a) there are several reasons to invest in call centre activities in Sweden. Sweden has a central

[10] Invest in Sweden Agency is a government agency providing business and economic data, contacts, solutions and procedural assistance free of charge for foreign companies considering establishment or expansion of business operations in Sweden.

[11] Interviews with ISA (Invest in Sweden Agency) representatives, January 29, 2002 and March 12, 2003. Statistics for 2003 are not available (April, 2004).

[12] Telephone interview with Aale Roos, Help Desk Institute Nordic Oy, November 28, 2001.

[13] These figures have been calculated from official statistics by December 31, 2002, from Sweden's and Finland's statistical databases, on total employment in each country. Statistics for 2003 are not available (by April, 2004).

geographic position in Scandinavia and the Baltic Sea Region. People here have good language skills in, for instance, English, German and French. Sweden has, compared to the other Nordic countries, also the highest share of people speaking the other northern languages. Internationally Sweden is regarded as a favourable location among the Nordic countries and there is evidence in form of a relatively considerable share of foreign investments in the country. Out of 41 of Fortune 100 organisations that have established Scandinavian headquarters and/or Baltic Sea Region headquarters for at least one business division, 35 chose Sweden, 2 Norway and 4 Denmark (ISA, 2002b). Some of these investments are made regarding call centre activities. There are also a number of call centres that have started up on small scale and then have been acquitted by foreign investors who wanted to expand their business to include the Nordic countries. These well established international call centres act as references, or models, for further call centre locations in Sweden. Another reason to invest in call centres in Sweden is Sweden's high ranking, together with Finland and Norway, as an information economy (ISA, 2001). Sweden has a deregulated telecom market with low telecom rates, reliable telecommunications and information technology infrastructure. Penetration of Internet access, mobile phones, and personal computers are among the highest in the world and Sweden has the highest volume of e-commerce in Europe. Sweden is also regarded as an internationally favourable choice for location with low corporate taxes, competitive wage costs, access to a knowledgeable, service-oriented workforce and a relatively low employee turnover. Besides foreign investments made in Sweden, there also exist Swedish owned call centres which tend to expand their market reach to include more than the Swedish market.

The general feasibility of Finland as a place to run businesses is regarded to be of high quality. In the World Competitiveness Yearbook 2001, Finland was rated the third best place for organisations to settle down after the United States and Singapore (IMD, 2001). According to the ministry of foreign affairs (Virtual Finland, 2001 and 2004), reasons to invest in Finland include a leading position in the development of electronic commerce, in terms of cellular mobile phone subscribers per 1,000 inhabitants, in organisations' ability to self-finance (i.e. generating enough cash-flow), in fitness between the educational system including university education and the needs of a competitive economy as well as regarding globalisation and credibility of managers. Finland also has a high ranking concerning computers per capita, infrastructure maintenance and development, organisations' usage of information technology to create value-added as well as in terms of sustainable development. The country also has a relatively high ranking in terms of real GDP growth for European countries. Looking at details, some quite visible differences compared to Sweden can be found. First, Finland has a long tradition of trade with the Soviet Union and currently Russia. The country is keen to act as a gateway to the Russian and Baltic Markets and many organisations have settled down in Finland with this in mind. This also applies for call centres where Finland is regarded as a good location for call centres that serve the Russian and Baltic market (Eurocallcentre, 2001). However, there is, due to language similarities in combination with low personnel costs, a growing tendency for call centres serving the Finnish market to locate in Estonia. The importance of call centre activities in Finland has generally increased during the last years and this especially applies to peripheral areas in the country. Another difference is that Finland is officially bilingual having both Finnish and Swedish as official languages. This secures capability to give high quality service also in the Swedish language. Third, the telephone market was early deregulated and this has lead to a competitive situation and a service orientation among teleoperators that compared to Sweden has been going on for a longer period of time.

A substantial difference in Finland as compared to Sweden is that the local national market is considerable smaller in Finland. Demand for call centres must be related to the population size, around 9 million inhabitants in Sweden and 5 million inhabitants in Finland. Another difference is that large, traditional export-oriented organisations such as Volvo, SKF and Alfa-Laval are few in Finland. Even Nokia's success is of quite recent history. Organisations were for a long period of time more directed towards domestic or Russian markets and thus the marketing functions were not so developed in Finland. In general, Finnish organisations have tended to focus more on manufacturing and therefore external networking and service activities have lacked in scope.

Swedish organisations are known to be non-bureaucratic and to have non-hierarchical business cultures (ISA, 2001). Together with the high penetration of information and communication technology, mentioned above, Sweden is often regarded as a country keen on adapting new technology and trying out *new organisational forms*. We can see that organisations focusing on their core operations make it possible to start up businesses activities in order to offer complementary services and one such emerging business form is so-called outsourced call centres. In general there are only a few organisations offering *outsourcing services* in Finland, but outsourced call centres are slowly emerging also in Finland (Eurocallcentre, 2001). In total for call centre activities in Finland, we see three parties. First, there is the traditional teleoperators that run massive call centre activities for themselves and for customer organisations. Then there are large organisations running their own call centres or outsource this type of business activity. Finally, there are also some small independent call centre operators on the market.

In both Sweden and Finland, political agreement prevails that *decentralisation of businesses* to sparsely populated areas is positive, both for the individual regions and for the country as a whole. Direct investments are made in the form of different types of grants for establishment and investments within certain prioritised geographical areas. Organisations that have geographically decentralised parts of their activity have often had major problems with high staff turnover in major cities as one of the main reasons behind their decision to relocate (cf. Moberg, 1993 and Stoltz, 2004). In Sweden, which has compared to Finland experienced a relocation trend from urban to rural areas for a longer period of time (cf. SOU, 1989), we see a growing range of geographically independent organisations such as call centres. We believe that this trend will continue to be important for call centre location, or relocation, in urban as well as rural areas.

5. CALL CENTRE LOCATIONS IN LJUSDAL, SWEDEN

Ljusdal, which is described in Moberg et al. (2001a), Moberg et al. (2001b), Stoltz and Moberg (2003) and Stoltz (2004), is the name of both the municipality and the central locality. Ljusdal is geographically located in more or less the middle of Sweden. The region has in total 19,771 inhabitants and there are about 4 inhabitants per square kilometre, which is among the lowest population density figures in Europe.[14] Even if the municipality is wide in geographical terms, the population is concentrated to some main localities, the built up areas of Ljusdal, Järvsö and Färila, i.e. people do not live far apart in Ljusdal. The total recruitment area however also comprises neighbouring municipalities.

Ljusdal is a region of interest because it is classified as a sparsely populated area in northern[15] Sweden and rural regions often has problems creating jobs. These types of regions are often characterised by a high rate of people migrating from the area and thus a loss of local manpower. Traditionally, Ljusdal has been characterised as a municipality with a high rate of traditional base industries such as forestry and timber, as well as some tourism. But during the last 5-10 years a thorough restructuring has taken place and the local labour market has undergone major changes. Ljusdal has managed to attract internationally competitive organisations with a considerable share of geographically independent business activities such as call centre activities. In Ljusdal there is a cluster of call centres and the municipality has

[14] According to official statistics by December 31, 2003, from the municipality of Ljusdal, on total population

[15] Geographically Ljusdal is located in the middle of Sweden but when considering population and number of work opportunities the municipality is classified as belonging to northern Sweden.

about 40 organisations that form this cluster. Examples of business areas are information management and brokering, booking and transport, advertisement and media as well as information technology development and support. The total number of jobs in the region is 8,250 and 850, or 10.3 percent, of these are found in call centres.[16]

Ljusdal has been actively engaged to compensate for their geographically disadvantageous location in Sweden. The municipality was early in investing in new *information and communication technology infrastructure* and this has been further developed during the years. Representatives of Ljusdal's call centres consider that the infrastructure as well suited for their needs. Ljusdal also has good *physical communications* in terms of road and railway networks. They do however not have any air connections and the nearest airport, which is located 56 kilometres away, is relatively small. In order to be close to the market and/or to clients, some organisations have chosen to complement their call centre activities located in Ljusdal with marketing and sales offices located in major cities such as Stockholm, Gothenburg and Malmö.

At municipal level, three important players appear in Ljusdal. These are the municipality, the industrial foundation (Närljus) and the job centre. *The municipality* has laid the basis for a positive development and growth of call centres in the region. A political decision taken already in the beginning of the 1970s to guide the municipality's industry towards new branches of industry such as geographically independent service activities in combination with active investments in suitable training programmes and infrastructure has played an important role in the development of Ljusdal's call centre organisations. A "call centre spirit", which is nationally known, has during the years been created and the region. In Ljusdal, people are proud of their call centres.

In 1986 the municipality created a political *foundation for trade and industry,* Närljus, which is jointly owned by the municipality and industry. Närljus gathers all activities for future business development within the district through an active partnership between the organisations and the local authorities. For instance, Närljus act as a regional contact coordinator for potential establishes and they have taken initiative and formed a group for co-operation among the call centre organisations and the local authorities. Our interviews with representatives from Ljusdal's call centres show satisfaction with both how the municipality's and Närljus' representatives act. The representative for Närljus is seen as a very committed person with a

[16] According to official statistics from Ljusdal's municipality by December 31, 2002 on daytime population and call centre employees. Statistics for 2003 are not available (by April, 2004).

sensitive ear and with good knowledge of the local businesses and their needs. Local authorities are characterised as forward looking, market oriented, proactive and helpful.

Ljusdal also has a very active *job centre,* which attends to manpower needs in the local trade and industry. According to our interviews the job centre is very sensitive to the entrepreneurs' needs. They have a management group that monitors training needs, communication solutions and employees' needs. Some opinions on the job centre are that they respond quickly, work effectively and professionally and find flexible solutions. We feel that without the commitment from the municipality and the local authorities a number of locations and relocations in Ljusdal would never have been implemented.

Ljusdal hosted by the end of 2003 about 40 *call centre organisations,* see table 1 for some examples. Ljusdal's structural change towards call centre organisations began already at the beginning of the 1970s with the start of Byggfakta. Several of the people interviewed feel that Byggfakta has been a model for the town and acted as a "door-opener" for other organisations. Byggfakta showed that work at a distance, i.e. activities outside urban areas such as Stockholm, with the help of telephony, was possible for information based organisations.

Ljusdal's call centres co-operate closely with each other. They meet regularly and arrange seminars or study visits with the aim of catalysing the spread of information and knowledge between the organisations. Almost all the interviewees consider the network as important for the region. There is a great sense of affinity between the organisations and even if they compete for the same personnel, this is not experienced as a problem. The call centre cluster gives employees a relatively high possibility of choosing their workplace and the region is able to retain competent personnel who otherwise would have sought career options elsewhere. There is a considerable rotation of personnel and managers between the organisations and we judge that this has contributed to an important spread of competence, which in turn creates strong ties within the network and strengthens the local identity. Our opinion is that this *social capital in form of a network of contacts* is an important factor for Ljusdal's successful development of call centres.

At the same time as the first call centre organisation began to set up in Ljusdal, the municipality made a political decision and started up an upper secondary school programme aimed at office work and distribution. Over the years, this training has profiled itself towards the region's call centres and this has lead to availability of a *skilled workforce* in Ljusdal. Inhabitants are in general familiar with the use of information and communication technology. Employees have long experience from using different forms of communication media for taking care of customer service activities on distance. Ljusdal's call centre cluster contains a number of organisations that act on a

Nordic market and this means that a workforce who speaks Nordic languages is available in the region. Rotation of personnel between organisations means synergy effects as it contributes to knowledge creation and spreading in the region. Access to motivated and competent personnel, with relevant training and professional experience for call centres, is an attraction factor for Ljusdal.

Table 1. **Examples of call centre organisations in Ljusdal with regard to type of activity (i.e. type of business and the principal's organisational belonging), number of employees (December 31, 2003) and year of establishment in Ljusdal. Type of activity is based on the following division: II = In-house and Inbound, IO = In-house and Outbound, OI = Outsourced and Inbound respectively OO = Outsourced and Outbound. Source: Ljusdal's industrial foundation Närljus. A more comprehensive table is given in Stoltz (2004).**

Organisation	Type of activity	Number of employees	Established in Ljusdal	Comments
Byggfakta	IO	48	1971	
Svenska Media	IO & OO	8	2003	Taken over from Byggfakta by employees in 2003
Annonskraft	IO & OO	6	2000	Spin-off from Svenska Media
ByggIndex	IO	Sold	2000	Subsidiary of Byggfakta - re-merged in 2002
MarknadsData	IO	14	1991	Spin-off from Byggfakta
Callcentermedia	IO	Relocated	1999	Spin-off from Byggfakta - relocated from the region in 2003
Q Survey AB	IO	12	1999	Conducts quality studies of Swedish call centres
DHL International	II	117	1992	
JKW Servicecenter	OI	-	1999	Taken over by Manpower Outsourcing AB in 2000
PPM	II	Sold	1999	Acquired by Manpower Outsourcing AB in 2001
Manpower Outsourcing	OI & OO	-	2001	Closed down in 2003
Alfakassan	II	29	1990	
Datasvar	OI	Relocated	1992	Relocated from the region in 1997
Twenty4Help	OI	340	1997	Result from the relocation of Datasvar
Solvus Support	OI	70	1997	Result from the relocation of Datasvar
Proffice	OI & OO	11	2003	

Call centres have relatively low entry barriers in terms of *capital required for investments.* Since most of the call centres located in Ljusdal have started up on small scale and then worked up some capital, they have managed to take on investments on their own. Financial help for investments have in some cases also come from some stakeholders who believed in a specific business. Another type of external capital is subsidies or grants. Ljusdal is located in one of the most highly prioritised support areas in Sweden and business establishments are entitled to various forms of grants. Received grants have not been a prerequisite for bringing about the establishments, but they have been of importance in the sense that they have constituted a push-factor for a number of the establishments.

In Ljusdal, suitable *premises* are available in general for call centre businesses. More specifically vacant premises and unused *equipment* after call centre closures have in at least three cases contributed to new business start-ups. Some of the interviewees felt that in principle they have started up their activity over a weekend. In these cases free capacity together with personal networks have governed the choice of localisation.

In Ljusdal about 1,000 inhabitants or 5 percent of the population is self-employed. This is a figure that points to *entrepreneurship* and individual initiative. In 1999 Ljusdal was ranked as Sweden's fifth most prominent region with a percentage growth of 6.2 percent (Affärsvärlden, 2001). For call centres we have identified a number of entrepreneurs who have contributed, either directly or indirectly, to business start-ups. There are management personnel and company founders who have been locally recruited from other organisations within the cluster. Some of them have had career as a motive since they have seen new business opportunities and acted upon them. Movements among management personnel and local spin-off establishments are regarded as an important factor contributing to the region's development. Other entrepreneurs have been driven by more coercive factors. In order to make a livelihood in the region, individuals have in these cases been more or less forced to become self-employed.

6. CALL CENTRE LOCATIONS IN KUUSAMO, FINLAND

The Finnish case is the locality Kuusamo in the northern part of Finland. Kuusamo, which is located in the Koillismaa area close to the Russian Border, is regarded as a sparsely populated area. In total, the region has 17,300 inhabitants or 3,7 inhabitants per square kilometre, but even if there is a low population density figure, the population is mainly concentrated to the central town Kuusamo where about 11,000 people live.[17] This means that as in the case of Ljusdal, people do not live far apart in the region.

Kuusamo suffers from migration problems, i.e. decline in population. However, the region is one of the most renowned and attractive tourist areas in Finland (Ruka, 2004), especially for winter sports, and this has lessened the migration problems. The unemployment figure for 2003 is 16,6 percent in Kuusamo and 9,0 percent for the whole of Finland.[18]

The main industries in Kuusamo are distributed as follows: Primary production 14 percent, processing industries 16 percent, services 64 percent (private 32 percent and public 32 percent) and unclassified 6 percent.[19] In total, Kuusamo offers 5,900[20] work opportunities and a share of 64 percent means that almost 3,800 work opportunities are offered within service businesses. Tourism and travelling is Kuusamo's main industry sector and the region has a long tradition of service orientation. More recently this has been extended to also include call centre activities as some establishments have taken place in the region. Kuusamo had by the end of 2003 eight call centre organisations established in the region (see table 2). The total number of work opportunities offered in call centres amount to 168 or 2,8 percent of the active population.[21]

***Table 2.* Examples of call centre organisations in Kuusamo with regard to type of activity (i.e. type of business and the principal's organisational belonging), number of employees (December 31, 2003) and year of establishment in Kuusamo. Type of activity is based on the following division: II = In-house and Inbound, IO = In-house and Outbound, OI = Outsourced and Inbound respectively OO = Outsourced and Outbound. Source: Kuusamo vocational institute.**

Organisation	Type of activity	Number of employees	Established in Kuusamo
TeliaSonera	II & IO	82	1998
Pfizer/Invespo	OO	15	2001
Sentraali	IO	23	2000
FinFun	II & IO	15	1989
Econet	II	13	1998
Mawell	OI	5	2004

17 According to official statistics by December 31, 2003, from the municipality of Kuusamo, on total population

18 According to official statistics by December 31, 2003 from the county of Oulu and from Finland's statistical databases.

19 According to statistics from the Naturpolis Kuusamo development programme.

20 According to interview with a represenatative for Kuusamo vocational institute April 23, 2004.

21 Ibid.

Diverse tourism call centers	-	15	-

Among Kuusamo's call centres, teleoperators who have set up a remote call centre for handling customer service predominate. Besides this are some examples of smaller call centres with connections to the tourism sector and a newly started call centre for health care advice given over the phone.

Kuusamo, which belongs to the Koillismaa area, has together with three neighbouring municipalities Kuusamo built up an area network with optical cabling. The network offers access points with ATM, ISDN and modems and there are continuous investments made to this *information and communication technology infrastructure.* Data communications and information network infrastructure are maintained at peak level in Kuusamo. Kuusamo enjoys the privilege of having its own *airport* with daily connections to and from Helsinki. From the nearest large city, Oulu, there is a drive of some 3 hours to Kuusamo. The fast *road connections* from Oulu as well as direct air traffic from Helsinki means that there are favourable links between the Kuusamo outlet and other parts of the country and the rest of the world. Further, Kuusamo eagerly waits to get its own international border station to Russia, which is due in a few years. This would mean a major growth in traffic in the region and probably also increased cross-border trade with Russia. Kuusamo does not have any rail connections.

The municipality of Kuusamo decided in 1987 to embark on developing telematics systems and services in the community. In 1996 actors realised that it was important to find job opportunities for people with educational degrees and they learned from Sweden that call centre activities was a promising option. Kuusamo is located peripherally in Finland but technology infrastructure was regarded as well developed and it was also affordable for this type of business. The municipality set up a goal to attract two employees to establish call centre activities in Kuusamo and employ 40 people by 1998 and 100 by 2000. The first call centre to establish was a so-called Help Desk for locally developed software. They started up September 1, 1997 and had 4 employees from the start. The following year Sonera trained employees for performing in-house support activities for the organisations end customers. The development continued and the target of 100 call centre job opportunities in the region was reached in 2000. Today the region offers 168 work opportunities in call centres.[22]

An important cornerstone for the development in Kuusamo is the *Naturpolis Kuusamo development program,* targeted at years 2001-2006. The program contains activities in areas such as competencies, information industry, tourism, local area services and rural development. Telephone services or

[22] This part is mainly based on Tikkanen and Korpela (2001).

call centre activities is one prioritised area in the Naturpolis Kuusamo development program. For more information on this program, see Naturpolis (2004).

A development project of Kuusamo Town and 6 organisations called *TVC24-project* (TeleVoiceCenter 24h) started up in 1997. This project is especially targeted towards call centre operations in the region. The project received partly foundation in 1999 by the European Union DGV/Atricle6. The main goal of the project is to train skilled personnel for the partner enterprises and to create permanent work opportunities for the recruited employees. Training programs are offered to people and most of the participants receive a work in a call centre after they have finished the program. The aim is also to develop the call centre - know-how within the sectors of information industry and travel services. The model has also been implemented in the neighbouring municipality Taivalkoski where there are further 70 call centre job opportunities.

The development of call centres in Kuusamo has lead to a decrease in the unemployment rate by 2 percentage points and the number of unemployed people in Kuusamo has been reduced by 10 percent (Tikkanen and Korpela, 2001). The call centre development has also been profitable from the community standpoint since each new work opportunity in the region means a tax income for the municipality. In total, the development has been of importance for the region as an employment creator and it has also brought capital to the region.

Kuusamo is entitled to the highest *EU-supports* available in Finland, i.e. they are a so-called Tavoite 1-region. Several national and local initiatives have added to the feasibility of the area for information industries. The initiatives have supported mainly education and infrastructure building, and their support to individual organisations has not been decisive.

When it comes to a *skilled workforce* for call centre activities, Kuusamo has a sufficient number of job applicants available who have received commercial and information and communication technology-related training. Major emphasis has been in the fight against unemployment, and preventing educated people to move from the region. Connections with the tourism industry equip the local people with a natural service attitude and this is also needed for call centre operations. Availability of workforce is seen as a key resource factor for Kuusamo. In addition, the good telecommunication infrastructure helps the situation. Kuusamo lacks their own higher education, but intellectual resources are collected from a close co-operation with the University of Oulu. The municipality also offers organisations operational facilities, for instance - on reasonable terms, if they decide to establish in the region.

The so-called new economy organisations tend to settle down in metropolitan areas such as Helsinki or other university cities, whereas traditional *entrepreneurship* has traditionally been strongest in the Botnia region. However, we can see no direct correlation between the establishment of call centres and existence of an entrepreneurship environment in Kuusamo. As it comes to individuals, there is not yet any visible call centre entrepreneur to be seen. Mainly the development has been within large teleoperating organisations. They have several motives to start up call centres and this includes; to find new traffic for their networks, to expand their business portfolio with value-adding activities, to establish themselves as socially responsible organisations in their environment or to put services to the call centre mode in order to decrease costs, educate customers in new forms of services as well as maintaining professionalism and quality of service. As it comes to organisation managers, no one has gained any major good reputation or fame for their call centre establishment activities in Finland. A telecommunications manager focusing at career advancements is more to focus on mobile services at the time being.

7. CONCLUDING REMARKS

In this paper we have illustrated call centre locations in two regions in Sweden and Finland. For the analysis we use our model for call centre location (Moberg et. al. 2004).

Both regions are classified as rural districts and this means that the local *market* is not enough to support businesses located in the regions. They are directly dependent on a national and/or an international market. Both countries have one of the world's highest information technology maturities and this is a prerequisite for e-work and geographically independent organisations such as call centres. As the national market is somewhat larger in Sweden as compared to Finland and that there are a considerable higher share of people who talk foreign languages in Sweden, we see that Market Existence and Access has a somewhat higher influence in Ljusdal, Sweden as compared to Kuusamo, Finland. Sweden sometimes acts a gateway to the other Nordic countries and Finland is often regarded as a gateway to Russia.

The *communication infrastructure* in both Sweden and Finland has a high standard. Networks for both physical and information-based transportation connect the whole countries. We can also see that there is a trend toward relocation and outsourcing of business activities. In order to gain competitive advantage organisations try to find cost effective solutions. This could involve a call centre located in a rural district or abroad. Sweden has a long tradition from the 1970s of supporting relocation of business activities from urban to rural areas. Today more than 11 percent of the total workforce in

Ljusdal work within call centres and the corresponding figure for Kuusamo is about 2 percent.

Ljusdal has a very positive *business environment.* Here we find active local actors and a positive call centre spirit due to co-operation and networks among the call centres located in the region. In Kuusamo, there is a high service attitude stemming from tourism and leisure activities. This means that there is a high potential for call centre activities. Both regions have regional actors who have developed the local call centre business climate. For instance large investments are made to the region's information and communication infrastructures and in the regions' educational and vocational training programs. In this respect the differences between Ljusdal and Kuusamo are relatively small.

In both countries we have seen a political support in form of grants. However the level of support is decreasing and in total the supply of risk capital is not the same in Finland as in Sweden. Capital is however not a scarce resource in neither country. *Resources* in form of a well educated workforce with language skills have traditionally been readily available in Ljusdal. This means, in combination with the business dynamics, that call centre organisations have been able to start up relatively quickly. We have identified the availability of a motivated and skilled workforce in the region. However the workforce is now becoming a scarce resource and call centres have recently started to move their operations and establish complementing activities in neighbouring regions. Kuusamo has a high unemployment rate. However they are probably not directly suitable for work in call centres even if the tourism and service tradition in Kuusamo indicates a high potential for call centres. Today the share of call centre work opportunities is 2 percent and the unemployment rate is 16,6 percent in the region.

Entrepreneurship and individual initiatives have a strong influence on business start-ups and location of call centres in a specific region. Both the studied regions have a high proportion of self-employed people - 1,000 out of 19,771 in Ljusdal and 1,000 out of 17,300 in Kuusamo. However none of the regions can be classified as an entrepreneurial region. In Kuusamo, call centres are mainly run by large organisations that have their head offices located in urban districts or abroad. In Ljusdal we can see a considerable rotation among call centre management personnel. We interpret this as an important factor for the call centre development in Ljusdal. It has contributed to the dynamics in the region and thereby also to a total positive development over the years. Ljusdal also shows, in relation to Kuusamo, a higher share of important social entrepreneurs that have acted to develop call centre business in the region.

To sum up the discussion we have drawn table 3. It compares the different factors influence on the climate for call centres establishments and location, or relocation, in a specific region. We have here illustrated that the two regions give different prerequisites for call centre locations depending on different market conditions and organisation related consideration in each country and region. There is also different business environmental and community related factors in each of the regions that affect call centre locations, or relocations, in these specific areas.

Table 3. **A comparison between the two regions. (Key: + = major positive effect, 0 = no effect or no major positive or negative effect, - = negative effect).**

Factor	Ljusdal, Sweden	Kuusamo, Finland
Market Existence and Access	+	0
Communications and Organisation Related Considerations	+	0
Business Environment and Community Related Factors	+	+
Resource Availability	0 (+)	0 (+)
Entrepreneurship	+	0

ACKNOWLEDGEMENTS

We wish to thank the Knowledge foundation and Vinnova for financial support.

REFERENCES

Affärsvärlden (2001). Regioner och kommuner - företagandet lyfter Stockholm (Regions and municipalities - entrepreneurship lifts Stockholm, In Swedish). Affärsvärlden January 10 2001.

Eurocallcentre (2001): *Knowledge centre on Call centres - Report Finland.* Downloaded from Federation of European Direct Marketing <http://www.eurocallcentre.com/> November 30, 2001 and April 23, 2004.

Finland's Statistical Databases. Accessed November 27, 2001 and April 23-29, 2004 through Statistics Finland's homepage <http://www.stat.fi/ or http://www.tilastokeskus.fi/>.

IMD (2001). *The World Competitiveness Yearbook 2001.* Lausanne: International Institute for Management Development (IMD).

ISA (2001). *Invest in Sweden - Report 2001.* Roglar, S. (eds.). Stockholm: Invest in Sweden Agency.

ISA (2002a). *Invest in Sweden - Contact Centres. Sweden - the natural location for contact centre operations in Scandinavia and the Baltic Sea region.* Stockholm: Invest in Sweden Agency.

ISA (2002b). *Invest in Sweden - Shared Services. Sweden - centre for support and infrastructure services in Scandinavia and the Baltic Sea region.* Stockholm: Invest in Sweden Agency.

Lorentzon, S. (1998). The Role of ICT as a Locational Factor in Peripheral Regions - examples from "IT-active" local authority areas in Sweden. *Netcom,* Vol. 12, No 1-2-3, pp. 303-331.

Moberg, A. (1993). *Satellitkontor - En studie av kommunikationsmönster vid arbete på distans* (Satellite Work Centres - A Study of the Communication Patterns As Pertains to Distance Work, in Swedish). Lic.-dissertation, No. 406, Economic Information Systems, Department of Computer and information Science, Linköping University, Linköping, Sweden.

Moberg, A., Rapp, B., Stoltz, C. (2001a). Ljusdal - the happy family? An example of a growing cluster of e-business companies in a rural district in Sweden. In *Proceedings of the 6th International ITF Workshop and Business Conference,* Amsterdam, Netherlands, August 26-30 2001.

Moberg, A., Rapp, B., Stoltz, C., Petri, C.-J. (2001b). How can one minus one equal three? The dynamics in an e-work district in Sweden, In *Proceedings of the 8th International Assembly on Telework: t-world2001,* Helsinki, Finland, September 12-14 2001.

Moberg, A., Rapp. B., Stoltz, C. (2004). *Towards a Model for Call Centre Location.* Paper submitted to Regional Studies.

Naturpolis (November 27, 2001 and April 23, 2004): Homepage accessed November 27, 2001 and April 23, 2004 through <http://www.naturpolis.fi/>.

NUTEK (1993). *Utlokalisering av tjänsteföretag - En konsultstudie* (Relocation of service companies - a consultancy study, In Swedish). NUTEK Rapport 1993:52. Stockholm: NUTEK-analys.

Ruka (April 2003, 2004). Homepage <http://www.ruka.fi/ > accessed April 23, 2004.

SOU (1989). *Omlokalisering av statlig verksamhet - utvärdering av utflyttningen på 70-talet* (Relocation of government activities - evaluation of the moving out during the 1970s, In Swedish). Huvudrapport SOU 1989:8A. Stockholm: Statskontorets publikationsservice.

SOU (1999). *Från callcenter till kontaktcenter - Trender, möjligheter och problem* (From call centre to contact centre - Trends, possibilities and problems, In Swedish). IT-kommissionens rapport 99:3, Statens offentliga utredningar 1999:38, IT-kommissionen. Stockholm: Fakta info direkt.

Stoltz, C. (2004). *Calling for Call Centres - A study of Call Centre Locations in a Swedish Rural Region.* Lic.-dissertation, No. 1084, Economic Information Systems, Department of Computer and information Science, Linköping University, Linköping, Sweden.

Stoltz, C., Moberg, A. (2003). *The Importance of Proximity for Geographically Dispersed Organisations - Indications from a Call Centre Cluster in Sweden.* Paper presented in the proceedings of the 17th Nordic Conference on Business Studies in Reykjavik, Iceland, August 14-16 2003.

Stoltz, C., Moberg, A. (2004). Call Centre, a concept full of Nuance - On definitions of Call Centres. In Stoltz, C. (2004). *Calling for Call Centres - A study of Call Centre Locations in a Swedish Rural Region.* Lic.-dissertation, No. 1084, Economic Information Systems, Department of Computer and information Science, Linköping University, Linköping, Sweden,

Sweden's Statistical Databases. Accessed June 2001 - April 2004 through Statistics Sweden's homepage <http://www.scb.se/>.

The municipality of Kuusamo (November 27, 2004). Homepage <http://www.kuusamo.fi/yleistietoa/index.htm> accessed November 27, 2001.

Tikkanen, H., Korpela, T. (2001): Development of Local Telematics Know-How and Business in Kuusamo. Paper presented at the e-työn alueelliset ulottuvuudet-seminaari, Tampere, September 4-5 2002. Downloaded April 23, 2004 from <http://www.ework.fi/materiaali/seminaari/TaunoK.doc>.

Virtual Finland (December 3, 2001 and April 23, 2004). Homepage <http://www.finland.fi/finfo/english/competitiviness.html> accessed December 3, 2001 and April 23, 2004.