Spatial diffusion patterns of call-centres in The Netherlands

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Abstract

The focus in this paper is on spatial diffusion patterns of call centres in the Netherlands. The number of call centres has increased rapidly in the last decade and it seems that impacts of call centres on the labour market are still underestimated.

We will pay attention to two spatial levels: first regional and second local. Given the labour intensity and quality required by call centres and the absence of physical contacts with consumers one might expect that most call centres are located in the more peripheral regions of the country. In those peripheral regions there is less pressure on the labour market and the level of education - in particular the ability to speak English – is almost as good as elsewhere in the country. At the local level we are interested in the precise location of the call centres. We expect that they will prefer back office locations or even locations on cheap industrial sites, again due to the absence of physical contacts with consumers. They only will need enough parking space for their employees, since this is a relatively labour intensive economic activity.

In this exploratory study we will analyze the spatial diffusion patterns of call centres in the Netherlands and link them to regional labour market developments and other location factors.

1. Introduction

Call centres are organisations - or units within organisations - whose primary role is to handle incoming or outgoing telephone calls. These calls are processed and controlled by either an Automatic Call Distribution system (ACD) (Taylor and Bain, 1999; Richardson and Marshall, 1999) or a predictive dialling system (Taylor and Bain, 1999). Others describe it as offices providing a variety of sales, marketing and information services remotely by telephone (Richardson and Marshall, 1996) replacing the need for face-to-face interaction with customers (Richardson et al., 2000).

In the past decade, the call centre sector showed a rapid growth in employment. The development is the fastest of all service sectors. Due to the footloose character of the call centre activities, they can be located wherever there is a good telecommunication infrastructure available. In large parts of Europe there is no lack of infrastructure that might hinder the location of a call centre. The location factor of major importance in the location decision for a call centre seems to be the availability of qualified labour. As will be shown, most of the research in this field is directed at the regional level. Are call centres located in urban or more peripheral regions? In this paper an additional focus is the location at the local level. Is the call centre located in the inner city, the suburbs or on greenfield locations? Moreover are they located on front office or back office locations, on office sites or industrial sites?

The regional dimension is important because development of call centres might be a very flexible means to reduce regional labour market discrepancies. Thus in a system of regions with high unemployment and low unemployment the emergence of call centres might be expected to reduce unemployment variations.

The local dimension may be important because of the transport implications. One might expect a tendency to locate the call centres at cheap locations with low accessibility via public transport. This might reduce the opportunity for certain types of employees who would rely on public transport. In addition it may add to the transport problems observed in many countries.

The different types of call centres are defined and the importance and rapid development of this service sector is described in section 2. Section 3 provides a literature overview of studies on locational aspects of call centres. In section 4 the outline of the study and the structure of a telephonic questionnaire held in the Netherlands is discussed and in section 5 some preliminary results are given.

2. Definition and development of the call centre sector

The first and most common type of call centre is the in-house call centre. This type of call centre is characterised by the fact that it is part of a larger company. It is a division of the parent company or organisation and handles calls strictly for that company or organisation. Outhouse call centres on the other hand are independent call centres that distribute calls for other companies or organisations.

In the Netherlands, these outhouse call centres account for only about 10% of all call centres (Research voor Beleid, 2001) but they are generally bigger than in-house call centres in terms of the number of agents and telephonelines they have. Since the beginning of the 1990´s outhouse call centres have started to develop rapidly in the Netherlands and their number is expected to keep growing faster than in-house call centres (Research voor Beleid, 2001).

Another division is between inbound and outbound call centres. Inbound call centres handle incoming telephone calls, so the initiative is with the client. Inbound call centres offer services such as helpdesk facilities, complaint services, and the provision of information. Outbound call centres provide external telephone services for a commissioner. A well-known example of outbound services is telemarketing. The share of the inbound services has been increasing in recent years.

A final division is between consumer call centres and business-to-business call centres. The last require highly qualified employees because it concerns specified services.

As will become clear later on for our research on the location of call centres in particular the division between inhouse and out-house call centres is of relevance.

The call centre sector creates more employment than might be expected. In the UK for example, telephone call centre employment was estimated at around 1% of the total work force in 1998, and this percentage is expected to have risen to 2.3% in the year 2002 (Bristow et al., 2000). In the Netherlands similar numbers are given. A total of 100.000 people were employed in the call centre sector in 1998 and this number was expected to have increased to 200.000 – and that equals about 2.5% of total employment - in the year 2000 (Research voor

Beleid, 2001). The fast growth of the call centre sector holds for the whole of Europe. There were hardly call centres active in Europe in 1990, but the number increased to about 12.000 in 1998 and is expected to be over 20.000 in 2002 (Datamonitor, 1998).
It is clear that call centres provide labour to many people and should therefore be seen as a valuable employment creator worth investigating. Because of this rapid expansion over the last decade in terms of employment and in terms of the number of locations, call centre development has gained growing interest amongst spatial economists.

Teleservice operations are concentrated in call centres to achieve cost savings (Richardson and Marshall, 1999). These authors mention the cost effective use of space (reduction of property costs), intensive use of technology[1] (reduction of capital costs), and sophisticated office technologies to assist in monitoring (management and supervisory costs). Finally and most importantly, call centres exist because economies of scale mean that fewer people are required for the same level of output at a concentrated site. Richardson and Marshall (1999) furthermore indicate that savings can be made by (outsourcing to) third-party or outhouse call centres. This is possible since call centres are often faced with peaks and troughs in call volume. Making use of part-time workers that can be called upon at short notice can solve the problems with the attraction of a sufficient labour pool related to this peaks and troughs-problem.

A last trend to be mentioned is the fear of call centre employees being replaced by automation and voice-recognition systems. As Richardson et al. (2000) call it, the evolution of the industry is a threat to continued longer-term employment growth. They divide developments in technology into two groups. The first being technologies that are already in use like Predictive Dialling and Interactive Voice Responsive systems. This development is more likely to be evolutionary than revolutionary and, although they pose a threat to employment, they can also increase numbers employed at the expense of other delivery systems. The second technology the authors mention is that usually associated with e-commerce, the internet and digital TV. These technologies have the potential to make call centres redundant. Other studies on the other hand indicate that this second type of technology (internet, e-commerce) has not excluded the growth of call centres but has been accompanied by it. These developments have not led to the demise of call centres but to the emergence of one-stop

[1] Because Automatic Call Distribution systems e.g. are designed for large scale operations

`customer contact centres´ (Bain, 2001). Richardson et al. (2000) also state that the threat to jobs in call centres due to the earlier mentioned Voice Responsive systems appears to be a plausible proposition. Routine customer questions can be dealt with in this way. This process is however limited by a number of constraints which necessitate human intervention.

3. The location of call centres

It is often suggested that call centres are relatively flexible in choosing their location due to their intensive use of "distance shrinking" technologies (Bristow et al., 2000) and the fact that there is no need for them to be close to their customers (distance-wise). In their choice of location, call centres are dependent on several factors. The most important one seems to be the labour market. An important question to be asked here is if call centres have sufficient access to appropriate labour. Although there seem to be relatively few demands on the quality of employees in terms of education or degrees, employers are often faced with inadequate personnel since there are demands on skills, training and experience which employees sometimes lack (Research voor Beleid, 2001). It is therefore that Bristow et al. (2000) state that, together with the need to be close to existing concentrations of allied activity and premises, the search for specific labour-supply characteristics makes certain areas more attractive than others. They argue that therefore "the choice of call centre location (and thus the potential employment benefit for regional economies) is heavily constrained by the existing unevenness in the spatial division of labour and is likely to perpetuate existing concentrations of dominant service-sector activities". Several other studies have also shown that when considering the location of a call centre, the most important factors identified by organisations, next to the provision of technologically suitable office accommodation, are factors related to the availability, cost and perceived competence of the labour force (Taylor and Bain, 1999, and Bain, 2001). That is why large conurbations were initially the main locations for call centres (Bain, 2001).

Richardson and Marshall (1999) mention several factors that are considered by firms when locating a call centre:

1) The availability of advanced telecommunications suitable for data and voice transmission and capable of hosting intelligent network services.
2) Telecommunication costs.

3) A pool of labour of sufficient quality.
4) Labour costs (60 to 70% of the total costs of a call centre (TNO, 2001).
5) Financial incentives offered by governments.
6) Attractive living environment for employees.
7) Low occupancy costs.
8) Access to good local public transport.

According to Richardson and Marshall (1999) the two most important factors are telecommunications infrastructure and labour. Telecommunications infrastructure however is not generally considered a constraint since it is available in most places. The availability of labour on the other hand may be a more serious problem since not all locations can necessarily meet the labour demands of call centres (Richardson and Marshall, 1999). Call centres demand a high amount of part-time workers and desire to operate 18 or 24 hours a day.

As mentioned before, call centres are relatively "footloose" and are less tied to locations close to their customers than regular service providing organisations. If call centres are constrained by historical factors, such as the need to stay within easy reach of head offices (which would be the case with in-house call centres) they tend to locate telephone operations inside or adjacent to existing sites in low-cost locations (Bristow et al., 1999). Grimley´s International Property Advisers (GIPA, 1997) found that in 1997 75% of new call centres were located near existing premises for these reasons. If these limitations on choice of location do not exist, like with outhouse centres, it could be expected that call centres would chose locations with relatively low costs of premises since the centre would not be bound to certain locations due to dependency of its head-office or mother company. According to Bristow et al. (1999) a call centre in this case is only limited by the presence of and proximity to supplies of labour, suitable telecommunication facilities, office space and property and transport infrastructures. They furthermore say that this locational flexibility may be at the advantage of more peripheral regions where the lower property costs and larger sites available outside of congested areas can be attractive to call centres. The total cost of property for call centres is indicated at only 6-8% of the total costs of running a call centre over a period of 10 years (GIPA, 1997). This however overlooks the fact that, in the case of an owner occupied property, these costs come largely `up-front´ (Bristow et al, 1999).

Another factor influencing the location decision of call centres can be government subsidies, as mentioned before. This is explained by the fact that call centres can provide genuinely new opportunities for the workforce, creating both full-time and part-time jobs (Richardson,

Marshall, 1999). However, although very plausible, further evidence of the impact of investment subsidies is not found in the literature.
According to Taylor and Bain (1999) the typical call centre operator is a young female. Although probably full-time, she is increasingly likely to be a part-time permanent employee, working complex shift patterns that correspond to the peaks of customer demand.
According to TNO (2001) the labour market problem has several dimensions in the Netherlands: recruiting qualified personnel; keeping current personnel; and offering career perspectives to current personnel. It also gives several causes for these problems. These are: the fact that a lack of personnel is a problem existing in the entire labour market. Second, the sector is relatively unknown to the public. Third, the negative image the sector has in the eyes of the public. Fourth, the negative image of the working conditions. Fifth, employees are too much focussed on recruiting new personnel instead of focussing on their current personnel.

In the Netherlands, these problems just described are most fierce in the area known as the Randstad. The Randstad is the conurbation including the cities of Amsterdam, Rotterdam, The Hague and Utrecht in the western part of the Netherlands. Call centres in this area have great difficulty finding qualified personnel. In recent years, the majority of outhouse call centres have chosen a location outside the densely populated Randstad area, due to the fact that call centres are relatively little bounded to certain areas to serve their clients (TNO, 2001), (van Geffen, Molenaar and Eshuis, 2001).

4. The outline of the study

The literature review has shown that in particular the activities of outhouse call centres are footloose in character, so they are free to choose a location that offers them the best conditions. In-house call centres are often connected to the parent company. Therefore, and because of the growing importance of outhouse call centres, we will concentrate in our fieldwork on outhouse call centres. We will use a small sample of in-house call centres as a reference group.
Another finding of the literature review is that most studies focus on the regional level: do call centres locate in peripheral of central urban regions? The local level received much less

attention: on what kinds of sites are call centres located within a city or are the located outside the built up area? In our study we will pay attention to both spatial levels.

In the period April-May 2002 we held a telephone questionnaire among over 50 outhouse call centres and 10 in-house call centres – the reference group – that we have traced via various branch organisations.

We divided the Netherlands in three areas consisting of the following Dutch provinces;

Randstad: North-Holland, South Holland and Utrecht

Intermediary zone: Gelderland, Flevoland and North Brabant

Peripheral zone: Friesland, Groningen, Drenthe, Overijssel, Limburg and Zeeland

A response rate of ..% was achieved. The main reason for not responding appears to be that the responsible staff could not find the time.

In table 1 the number of interviewed in- and outhouse call centres are presented by region. The table shows that slightly more than 50 % of the call centres are located in the Randstad.

Table 1: The interviewed call centres

	Outhouse	In-house	Total
Randstad	27	5	32
Intermediary zone	16	3	19
Peripheral zone	9	1	10
Total	52	9	61

Another division can be made if we analyse the municipality of location. Most of the call centres are located in the major municipalities within the provinces. The exceptions can be divided in two categories: satellite cities and second order cities. Only one in-house call centre is located in a satellite city, the other eight are located in the major municipalities of the provinces. This pattern is more diffuse for outhouse call centres (see table 2).

Table 2 Type of municipality where outhouse call centres are located

	Major city	Satellite city	Second order city	Total
Randstad	15	9	3	27
Intermediary zone	12	4		16
Peripheral zone	8	1		9
Total	35	14	3	52

Although the majority of outhouse call centres is located in the major cities, a substantial share is located in particular in the satellite cities. This is a first indication that outhouse call centres are more footloose to choose their location than in-house call centres. The satellite cities in the Netherlands often are medium sized cities where – relatively well-educated - middle-income households live and sleep and the head of the household works in the major city. Thus, in the satellite cities a large labour pool can be found of people either unemployed or woman willing to work part-time.

In the questionnaire we asked the call centres, besides for some general information such as the number of employees and seats, to describe their present location. Both the location within the city (inner city, suburb, etc.) and the type of industrial site (office location, business park, industrial site, etc.) they are located on. In an open question we asked for the three main reasons behind the selection of the present location. Furthermore, we asked if the company was relocated, and if yes from where, from which kind of location (location in the city and type of site), and what were the main reasons to relocate. Moreover, we asked them to give the service area the call centre is covering (regional, national or international). Finally, we asked for the main obstacles within the organisation of the call centre. This last question was meant to get an impression of the impacts of locational factors in the overall performance of the company.

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