

The Clustering of Financial Services in London*

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Abstract

This paper reports a one-year study which investigated the clustering of financial services activity in London. A questionnaire asking about the advantages and disadvantages of a London location was sent to a stratified sample of 1,500 firms and institutions. In addition, thirty-nine on-site interviews with firms, professional institutions, government bodies and other related agencies were conducted. The study finds that banking, including investment banking, forms the cluster's hub with most other companies depending on relationships with this sub-sector. Generally, the cluster confers many advantages to its incumbents including enhanced reputation, the ability to tap into large, specialized labor pool and customer proximity. The localized nature of relationships between skilled labor, customers and suppliers is a critical factor which helps firms achieve innovative solutions, develop new markets and attain more efficient ways to deliver services and products. Particularly important are the personal relationships which are enhanced by the on-going face-to-face contact that is possible in a compact geographical space. Many of the cluster's advantages are dynamic in that they become stronger as agglomeration increases. The study also finds important disadvantages in the cluster which threaten its future growth and prosperity. These include the poor quality and reliability of transport, particularly the state of the London Underground and links to airports, increasing levels of regulation and government policy that is not co-ordinated with the whole of the cluster in mind.

Key words: Industrial clustering, agglomeration, financial services.

1 Introduction

Clusters have been defined in many ways reflecting multidisciplinary interest and their varied form ranging from the weak which do not confer significant advantages to incumbent companies to the strong which enable high and sustained productivity (Markusen, 1996; Gordon and McCann, 2000; McCann *et al.*, 2002). A general definition that captures the essence of the strong sustainable cluster is provided by the UK Department of Trade and Industry (White Paper, 1998):

A geographic concentration of competing, collaborating and interdependent companies and institutions which are connected by a system of market and non-market links.

What are the strengths of this definition? Firstly, it does not relate to a single industry; rather it merely requires that companies in a cluster are *interdependent* in some way. This makes sense. For example, we know from the early work on the Silicon Valley cluster that it includes not only microelectronics firms but also venture capitalists (Saxenian, 1994). Secondly, a cluster is defined not just in terms of companies but also supporting institutions. These institutions can play an important coordinating role in strong clusters (Best, 1990; Piore and Sabel, 1984). Thirdly, in addition to competition, non-market linkages are emphasized. Cooperation, borne out of a common culture and trust, is known to be particularly important with respect to innovation (Camagni, 1991; Capello, 1999). Finally, the definition encourages us to think of clusters as complex *systems* of industrial organization. It is this very complexity that makes them difficult to copy and therefore sustainable (Maskell and Malmberg, 1999).

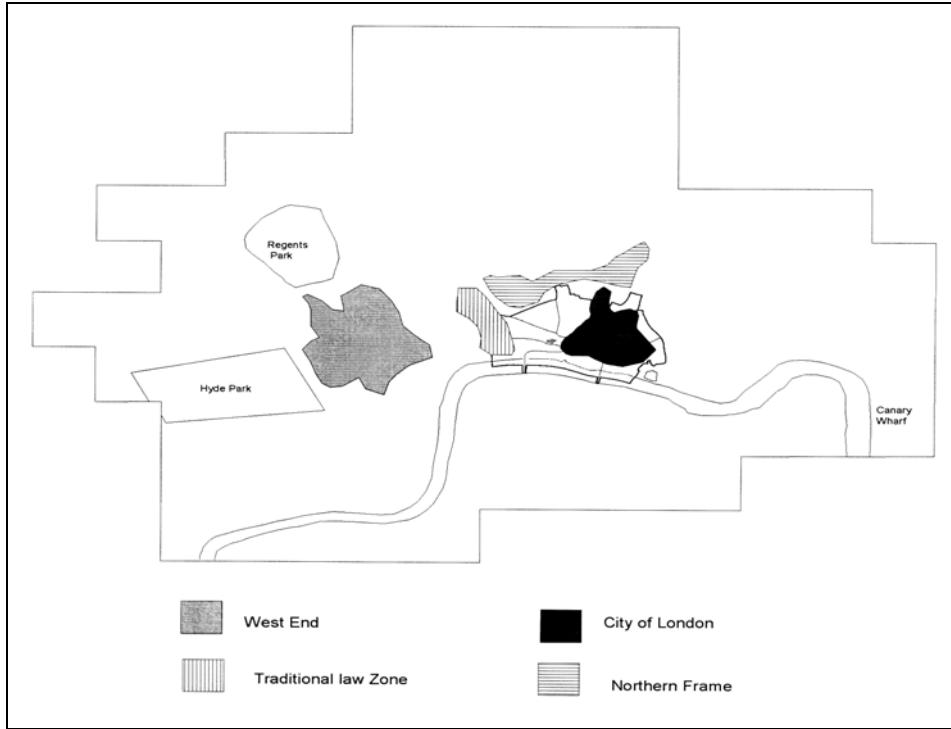
Recent empirical studies show that companies in strong clusters grow faster than average and that strong clusters attract a disproportionate amount of new entrants (Cook *et al.* 2001; Cook and Pandit, 2002; Pandit *et al.* 2001, 2002). Also, that productivity (Henderson, 1986) and innovation (Audretsch and Feldman, 1996; Baptista and Swann, 1998) is higher within strong clusters . In short, clusters can lead to superior economic performance. What is more, cluster benefits are found to accrue in many different types of manufacturing and service industries from aerospace, biotechnology and computing to broadcasting and financial services (Agnes, 2000; Beaudry *et al.*, 1998; Pandit and Cook, 2003; Wrigley *et al.*, 2003).

The study reported in this paper contributes to this emerging understanding of the link between clustering and economic performance. It examines the benefits and costs accruing to financial services firms located in London, Europe's largest and most important financial services cluster. The paper is structured as follows. Section 2 details the study's methodology. Next the study's findings are presented and analyzed. A final section concludes and draws key policy implications.

2 Methodology

The London financial services cluster is depicted in Figure 1. The cluster includes companies and institutions engaged in banking, insurance, securities dealing, fund management, derivatives, maritime services, foreign exchange, bullion markets, legal services, accounting and related services, management consultancy, and other professional and support services (advertising and market research, recruitment, education, financial publishing, software development). There are five distinctive sub-concentrations. First, Canary Wharf to the East which is the home of some of the largest investment banks. Second, the very dense “square mile” that is the City of London (“the City”) featuring banks, insurance and law firms. Third, a less dense West End, concentration featuring banks near Mayfair and advertising in Soho. Fourth, an incipient concentration north of the City featuring services such as architecture and business support. Finally, a concentration that lies in-between the City and the West End consisting of law firms located in close proximity to the law courts. Each of these sub-concentrations are fundamentally interdependent and make up the general London financial services cluster.

Figure 1: The London Financial Services Cluster



Data on financial services clustering in London were collected via a postal questionnaire survey and via an in-depth face-to-face interview survey. Both survey designs were informed by relevant theory (see Appendix 1 for an overview). For the questionnaire survey, 1,500 questionnaires were posted. The sample was selected using a stratified method. 100% of the largest 350 firms were selected. These were identified primarily from a database supplied by the specialist information provider *Market Locations*. The remaining 1,150 firms were drawn at random from the rest of the *Market Locations* database (using a random number generator). The original mailing went out in April 2002 with a follow-up in June 2002. A third mailing was considered but rejected in view of the good response rate to the first two mailings. A total of 310 usable questionnaires were returned, a response rate of just over 20%.

The postal questionnaire data are presented in Appendix 2. In almost all cases, respondents were asked to rank the importance of a factor from 1 (not important) to 5 (very

important) with an option of 0 if not applicable¹. Factors are presented in total score rank order which is simply the sum of recorded scores for a given factor. For example, a factor which received 2 ranks of 1 (not important), 2 of 2 and 2 of 5 (very important) would receive a total score of $2 \times 1 + 2 \times 2 + 2 \times 5 = 16$. This method could produce anomalous results (e.g., a factor which receives some 1s and many 5s being ranked above one which has a lot of 4s, no 1s but relatively few fives), but, after close inspection, does not appear to.

A useful benchmark for interpreting these total scores is the average (mean) of the total score across all questions (where it was possible to compute a total score) which is 855. This may be thought of as the score you would typically expect a factor to receive. The 95% confidence interval around this average is 808-901. Accordingly, a useful rule of thumb in comparing the relative importance of each factor is that any total score below 808 is relatively unimportant and any total score above 901 is relatively important.

The heavy black lines divide factors into groups where there is no statistically significant differences in the total score within groups but there is a statistically significant difference between groups (based on the “conservative” sign test - see Appendix 2). This indicates that factors within two heavy black lines were regarded as being of roughly equal importance by respondents, but either side of a black line there is a difference in the degree of importance attached to a factor.

Tests were conducted for the possible existence of statistically significant differences in the scores among different *lines of activity* (using contingency tables) and for significant differences among *firms of different size* (using the Kruskal-Wallis analysis of variance). Such differences are commented on by exception where they are particularly strong and interesting.

Two sets of analyses for differences by line of activity were performed. The first looked at the three most frequently occurring lines of activity in the sample: banking, legal services and insurance². These three comprise half the sample and for technical reasons explained in Appendix 2 allowed the most fine-grained analysis to be performed. Other

¹ The number of responses to many questions does not add up to 310 (the total number of questionnaires returned), for the simple reason that some respondents did not answer every question.

² In the questionnaire, each firm was allowed to rank up to three lines of activity in order of importance. The analysis of the influence of line of activity is based only on number 1 rankings (see the figures in the boxes in

sectors had too few responses to analyze without re-working of the data which would have entailed aggregation and the associated cost of loss of detail about the degree of importance attached to each factor.

Firm size is based on the number of employees at the establishment to which the questionnaire was sent. Some firms with very few employees were subsidiaries of substantial firms, the leading example being the London offices of central banks from around the globe. However, perusal of the sample reveals that the majority of firms categorized as small were genuinely small firms and not the small plants of large firms.

The interview survey was designed to provide qualitative evidence complementing quantitative data gathered by the postal questionnaire. Whereas the postal survey provides hard, measurable evidence on discrete questions from a large sample of firms of different sizes, the in-depth face-to-face meetings elicit “softer” evidence on the processes underlying the data drawing on the experience of senior practitioners in leading London financial services organizations. In order to explore complex functional relationships associated with spatial clustering freely, a semi-structured interview methodology was adopted. The interview schedule (Appendix 3) was used to guide discussion towards the key research themes and a series of prompts and probes were introduced by the interviewer to refine lines of questioning as new insights and understandings emerged. This methodology provided the flexibility to utilize knowledge gained progressively during each interview to inform the dialogue building a rich data base overall on particular circumstances and variables. Importantly, the approach allowed the identification and exploration of issues prioritized by respondents themselves as relevant to the research questions and the development of a sound understanding of causes and effects. The scheduled interview length was 45 minutes but in many cases discussion extended to 60 or 90 minutes. The aim was to interview a selection of senior executives in leading organizations within key sub-sectors. Such organizations, in a series of sub-sectors: banking, auxiliary finance, insurance, legal, accounting/consulting, were identified using 2001/2002 sources, for example *The Banker*, London Investment Banking Association (LIBA), International Financial Services, London (IFSL) and invited to participate. While

question 1 in Appendix 2). There were very few overlaps between the largest categories with, for example, very few banks indicating they also had insurance operations and *vice versa*.

most firms were large by international and London standards, prominent small, specialized organizations were included. The sampling strategy was weighted towards banks and auxiliary financial services due to their strong representation, concentration and importance in London.

The plan was to conduct 30 interviews – 14 banking, 6 auxiliary financial services, 3 insurance, 3 legal and 4 accounting/consulting, selecting up to 20 firms in the City and up to 10 from elsewhere in the cluster. For practical reasons, interviews were arranged on a first come first served basis regardless of location so, to ensure a reasonable representation geographically, more than 30 interviews was actually conducted. In total, 39 interviews were conducted across seven sectors. The interview results were coded numerically and sorted by both sector and location variables and offer an understanding of the processes that constitute the clustering phenomenon as seen through the eyes of some of the most senior decision-makers in the London cluster.

3 Questionnaire and Interview Survey Findings

This section reports the key findings of the questionnaire and interview surveys. It begins with an overview of the benefits of clustering and then proceeds to investigate four major themes (the labor market, the importance of personal relationships, sources of help with innovation and interdependencies) in more detail. Attention then shifts to the disadvantages of a London location and the nature and extent of declustering.

3.1 An Overview of General Benefits

There are several important benefits of a London location. The findings are summarized in Table 1 in total score rank order. The importance of a credible address stands apart at the head of these advantages and indeed has the fifth highest total rank of all factors in the questionnaire. It is also among the most consistently mentioned themes in the interview survey. Location can perform a valuable economic role by transmitting a credible signal of a firm's history and quality to its customers. Economic theory suggests that firms that provide the highest quality will have the greatest incentive to acquire the most favorable locations. Accordingly, the occupancy of the most prestigious address is a signal conveying valuable information in the market. Reputation effects are themselves a

source of cluster advantages as opinion, good or bad, influencing the reputation of an individual or firm, will flow more easily in a more compact geographical space. The interview survey highlighted the notion of a credible address as a well regarded *brand*. For example, a City location turns a law firm into a “*City law firm*”. Similarly, insurance companies gain prestige when in close proximity to Lloyds of London.

Table 1: General Benefits of a London Location

How important are each of the following benefits of your location?	1	2	3	4	5	0	Total
Your address is important to being perceived as credible	18	23	63	111	91	2	1152
You benefit from a strong, skilled labor supply	21	22	62	95	85	22	1056
You benefit from being close to market-leading customers	18	46	66	88	77	12	1045
Your customers external to London find it easier to locate you	32	42	72	98	46	15	954
You benefit from being near professional bodies	36	59	79	68	52	11	923
Knowledge transfer from the City’s “financial atmosphere”	28	45	75	72	57	28	916
You benefit from being near leading competitors	49	58	63	73	41	23	851
Customers external to London find it easier to interact with you	45	58	87	62	35	19	845
Ability to find firms who will supply bespoke services	34	75	83	56	36	22	837
It is the best place to be to take market share from rivals	37	60	74	65	39	32	834
Proximity to a relevant exchange or physical marketplace	55	36	70	44	57	45	798
Ability to benchmark against competitors	67	68	72	43	23	33	706
Local rivalry amongst competitors is a powerful spur	63	70	69	44	18	42	676
Ability to access real time information on market trends	80	65	49	44	27	41	668
Support from local government	119	66	33	13	11	64	457
Access to venture capital	113	46	31	13	11	90	405

There are some important differences among firms regarding the importance attached to this advantage. Firms in legal services and management consultancy place significantly

more importance on having a credible address. These businesses provide classic “credence services” where it is not only difficult to evaluate the quality of the service provided in advance, but also, to some extent even after the service has been provided. For such services, customers rely heavily on either a long standing relationship or on a projected image (partly created by the right address). This excerpt from an interview with a law firm summarizes very clearly the importance of a “City” address and associated branding:

Geographically we’re a bit pompous – most people come to us and I guess the issue would come if we felt we had to open another office – it would be madness – Things would have to change dramatically before we would leave the City. There’s a buzz about the place … the reason we have an office in the City now is that this is the biggest legal market in the UK and one of the biggest legal markets in the world. We want to be part of that.

The second highest rated benefit of a London location is the ability to tap into a strong, skilled labor supply. Section 3.2 discusses labor market benefits in detail.

Proximity to customers and being easily located by customers figure highly among the benefits of a London location. Being close to customers and being easily found by external customers tended to be of greater importance to legal firms, but the difference was not statistically significant. Insurance companies place significantly greater emphasis on being near market leading customers and being close to a physical exchange or market place as did property/real estate firms. These comments are representative of firms in the insurance and property/real estate sectors:

And in terms of our location – it is very central, it’s in the heart of the City, we’re in the financial services industry and this affords a very convenient location for what is the HQ … and it means communications are good. As it’s in financial services we have a lot to do with financial institutions, with investors, our fund management business is just down the road, so there is an ease and proximity of communication.

Our premises have to be in the City of London because this is their market focus. So we wouldn’t be anywhere else because this is what we deal with – the City of London and its office development.

Banks place significantly higher importance on knowledge transfer and on being near a strong skilled labor supply. They also rank support from local government more highly than insurance or legal firms. At interview, such factors were mediated through the interdependencies of the market/client interface and inter-firm relationship, couched in both

formal and informal networks and social interactions. As one major investment bank suggested, they were in London because of the “sheer intellectual infrastructure” and “the professional suppliers available”. But, the bottom line was, if a bank wanted to cut it as a “global bank” they had to be in London. Here are two typical comments from banks:

We’re here for two reasons – one is that we have an ambition to be an international bank and you can’t be an international bank unless you have something in London. The other is that the exposure to London markets and London personnel and the ways of doing things in London is something we want to gain experience of and communicate through the rest of the ... Group.

There’s no chance of us moving anywhere else. First and foremost, as long as London remains the financial center for Europe, then I don’t see ... [us] ... moving away from it. Even if we changed the direction of the company or whatever we’d still need to have a presence in London if you’re going to be a serious player in the financial markets.

Banks and legal firms were significantly more likely to rate proximity to professional bodies as being an important advantage of their location and management consultancies were significantly more likely to rate it as being unimportant. At interview, banks referred to bodies like the Bank of England or Financial Services Authority, and legal firms the Law Society, and infrastructure of the court system.

There is a marked difference between firms in the importance attached to being near leading competitors as a general advantage of locating in London. Banks, insurance and legal firms were much more likely to rate this factor as being important than firms in other lines of activity and management consultancies significantly less so. The results are shown in Table 2. In this table the crucial comparison is between the count, which is the number of firms that gave a response in each category, and the expected count which is the pattern which would be observed if the number of firms in each line of activity had their responses spread over the (three in this case) categories of response in the same proportions as for the total responses added over all firms. Therefore any case where there is a big difference between the count and expected count indicates that firms in a particular sector regard a factor as being unusually important or unimportant. The table shows, for example, that we would expect only 9.8 of the 29 management consultancies to rate proximity to competitors as not important but in fact we see that 21 of them did, which is a very marked difference.

Table 2: The Importance of Being Near Leading Competitors

		Not Important	Moderately Important	Important or very Important	TOTAL
Banking	Count	12.0	7.0	24.0	43.0
	<i>Expected Count</i>	14.6	9.8	18.6	43.0
Insurance	Count	16.0	11.0	30.0	57.0
	<i>Expected Count</i>	19.3	13.0	24.6	57.0
Legal services	Count	10.0	16.0	31.0	57.0
	<i>Expected Count</i>	19.3	13.0	24.6	57.0
Investment banking	Count	6.0	8.0	6.0	20.0
	<i>Expected Count</i>	6.8	4.6	8.6	20.0
Fund management	Count	7.0	4.0	4.0	15.0
	<i>Expected Count</i>	5.1	3.4	6.5	15.0
Management	Count	21.0	3.0	5.0	29.0
	<i>Expected Count</i>	9.8	6.6	12.5	29.0
Accounting	Count	8.0	5.0	2.0	15.0
	<i>Expected Count</i>	5.1	3.4	6.5	15.0
TOTAL	Count	80.0	54.0	102.0	236.0
	<i>Expected Count</i>	80.0	54.0	102.0	236.0

Banks, investment banks and fund management firms were significantly more likely to rate the ability to gain real time information about market trends as an important advantage of a London location than other firms, and accountancy firms and management consultancies are significantly more likely to rate it as unimportant. At interview, these findings from the questionnaire survey were substantiated in more detail. Banks in particular, acknowledged that proximity to the market and organizations which provided real-time data was crucial for their survival in the market, which was mediated in many instances through personal interaction and social relations. The spur of local rivalry was significantly more likely to be viewed as an important benefit by banks and legal firms and significantly more likely to be viewed as unimportant by accounting firms and management consultancies. The ability to benchmark against competitors was of far greater importance to firms in legal services than other lines of activity, whereas not a single management consultancy and only one accounting firm saw this as being either an important or very important advantage. As regards size effects, larger firms place significantly more emphasis on the importance of being near to market leading competitors, the ability to benchmark, being near a strong, skilled labor force and the spur of competition.

One feature which was brought out in a number of the interviews was the importance of the wider attraction of London as a major metropolis. As one firm put it, “its history, its appearance, its buildings, its culture, its arts”. Interviewees emphasized the need to

maintain London's image, as the place people want to live and work with regard to contemporary lifestyle, fashion, choice, and taxation. London's openness, cultural diversity, cosmopolitanism and "buzz" were seen as governing the marginal decision for global companies about where to locate new business. One banker stressed that, "Importantly, as a financial center, London is an open society that is accepting to overseas people and to business".

London is seen as a positive place to come to because there is so much to do – the social environment rather than just the economic e.g., in comparison with Frankfurt – you can do a similar job in Frankfurt but outside the job it just doesn't have the richness of things to do in a London environment. And so London, not just as the City, but London as a whole has that pull ... there's no chance of our moving anywhere else.

The vibrancy of the arts is a major pull against the negative factors – the arts, restaurants and so on. Yes it's a case of nurturing it.

3.2 The Labor Market

The labor pool from which the London financial services cluster can draw is clearly one of its greatest assets. The questionnaire and interview surveys indicated the extent to which London displays classic cluster advantages in the labor market (see Table 3).

Table 3: Labor Market Benefits

To what extent does labor flexibility within London lead to the following results?	1	2	3	4	5	0	Total
A fluid labor market helps attract good staff	15	31	90	96	50	22	981
It is generally easy to recruit good people at short notice	15	36	94	98	41	21	966
It helps spread a network of contacts	19	35	88	94	47	22	964
It helps to spread knowledge of good practice	18	33	107	92	34	21	943
We can quickly tailor our staffing levels to our needs	17	50	103	77	32	26	894

The pulling power of London's fluid labor market is one of the most important engines of cluster dynamism. While a small number of respondents did comment on the negative effects of mobility, such as the bidding up salaries and losing key staff to competitors, the advantages of mobility seem to greatly outweigh the disadvantages. There is a general

tendency for banks to rate these labor market advantages more highly than insurers or legal firms.

The strength of the London labor market was consistently stressed in the interview survey. Many respondents in all sectors remarked that the depth of expertise across the range of the professions is vastly superior to anywhere else in Europe. Several pointed out that the size of the labor force in financial services in London far exceeded the entire population of Frankfurt. Here is a typical response:

One is there is a skills base, people both front and back office, that exists in London that you'd probably have difficulty finding elsewhere in the volumes you need it to support the industry. So because the industry's grown up and evolved in the City then around it you have a large pool of skilled resource in the areas you need it and some of those areas are quite specific. So that's the major point.

The existence of a large labor market in a cluster gives rise to two key advantages. Firstly, labor is attracted into the market, because the size of the market provides a better chance of continuity of employment. Secondly, the sheer size of the market provides an incentive for people to invest in highly specific skills. As Adam Smith so penetratingly observed over 200 years ago, the division of labor is limited by the extent of the market. Size coupled with the status and prestige of London and the fact that the most interesting and most well-rewarded work is to be found there acts as a magnet for talent.

London offers a wide array of career opportunities both within large firms and through the ability to move easily between employers. Several firms spoke of the problems of attracting top talent if they were in the regions. This is part of a classic self-sustaining process in clusters. The advantages of the cluster, including the size of the labor pool and other spillovers between firms, mean that the cluster is unusually productive and so more resources flow to the cluster and these re-enforce its advantages. What also emerges as being important about this process in London is that it acts as a magnet not only for national but also international talent. This and the rich ethnic mix which exists in London anyway means that there is access not only to a pool of talent, but one which collectively speaks a vast range of languages. One respondent of a major global non-UK firm rated London's labor market as having the greatest ethnic diversity of any of the locations in which they operated, at least as far as the relevant labor market went. The prestige of the capital, the quality of the experience that can be gained there, the ability to perfect their

English and its reputation as a cultural center are all features of the mix which makes London so attractive. An interesting point made by two respondents was that many non-UK employees are keen to work and live in London so that their children will attend English speaking schools and develop strong bilingual skills. Culture alone is not enough, however, and one respondent commented on how low the flow of international talent to Paris is when compared to London.

The London labor market was seen to have a number of other important features in the interview survey. The flexibility of the market was regarded as being an advantage compared to other European countries. As one non-UK banking respondent put it, “We’re not afraid to put people here”. In the face of the natural cyclical nature of financial services, the flexibility to contract and expand when necessary is placed at a premium. A banker commented:

In x you get – I can’t do this, I can’t do that. I can’t employ these, I can’t employ those – in a way which just doesn’t exist in London. It is important ... The reality is in London we have virtually total flexibility as long as we have the money.

Another feature is the ability of staff to gain experience in London and this acts as a means of transferring best practice internationally. An analysis of the geographical reach of London’s labor market in recruitment terms indicated two main trends. Firstly, most labor is recruited from within the South East of England. Secondly, the ability to draw in labor from around the world, not necessarily in great numbers, is important and very important to a small number of firms. For some grades of staff, the recruitment is overwhelmingly of people already in London but the more senior and more specialized labor becomes, the further a-field the relevant labor market extends and for some types of labor the London labor market has global reach. In Table 4, banks and investment banks emerge as recruiting a significantly smaller proportion of their staff from the South East and insurance firms significantly more, one investment banker commented:

Our skills are brought from all over Europe to London. We see London as *the* European hub in our European network.

Table 4: Recruitment of Staff (all grades) from South East England

		<61%	61-80%	81-100%	TOTAL
Banking	Count	16.0	12.0	16.0	44.0
	<i>Expected Count</i>	13.1	8.2	22.7	44.0
Insurance	Count	13.0	6.0	40.0	59.0
	<i>Expected Count</i>	17.5	11.0	30.5	59.0
Legal services	Count	15.0	14.0	31.0	60.0
	<i>Expected Count</i>	17.8	11.2	31.0	60.0
Investment banking	Count	9.0	5.0	6.0	20.0
	<i>Expected Count</i>	5.9	3.7	10.3	20.0
Fund management	Count	1.0	4.0	12.0	17.0
	<i>Expected Count</i>	5.0	3.2	8.8	17.0
Management consultancy	Count	14.0	3.0	13.0	30.0
	<i>Expected Count</i>	8.9	5.6	15.5	30.0
Accounting	Count	5.0	2.0	9.0	16.0
	<i>Expected Count</i>	4.7	3.0	8.3	16.0
TOTAL	Count	73.0	46.0	127.0	246.0
	<i>Expected Count</i>	73.0	46.0	127.0	246.0

Responses on commuting patterns in the interview survey revealed that in many cases staff tend to come from specific areas in and around London and that ease of access for skilled client facing, secretarial and back office staff to an existing central London office would be a key factor ruling out a significant change of location. The concentration of transport nodes around the City was seen as a major advantage in terms of staff recruitment. In banks and legal firms, high earning skilled staff were said to favor living in the more expensive outer boroughs of London, for example, Richmond-upon-Thames and Wimbledon, or the West End, for example Kensington, or the rural commuter belt. Some senior staff preferred to commute weekly to London and retained central London flats convenient for the office. There was also evidence of some inter-city weekly commuting to London from other UK and European cities by senior staff. Skilled support staff tend to live further from the center of London, either in the suburbs or outside London where housing prices are lower. Distance from central London was related to age, household circumstances, and cost. Younger skilled staff were said to favor living in fashionable and convenient central London districts while older staff of all grades with children were said to move further out from the center in spite of added commuting time and cost. The location of favored schools emerged as an important housing location factor in some interviews.

The ability to recruit senior staff via informal channels was signaled as an important advantage of operating in a compact geographical space. Not surprisingly, informal

channels are least important for graduate recruitment which tends to be more routinized and where the candidates concerned will have less of a reputation that might be broadcast over informal channels. The informal recruitment of senior staff is particularly important in investment banking and fund management. It is noticeably less likely to be regarded as important by legal firms. Firms in legal services rate informal recruitment of graduates significantly more highly than do banks and insurers. Informal recruitment is also reasonably important for client-facing staff. Insurance companies are significantly more likely to rate informal recruitment of client-facing and back office staff as important.

Finally, the presence of a pool of talented labor with relevant skills was regarded as a highly important factor which contributed to the ability of firms to innovate. There is virtually no difference in the importance attributed to this factor by firms in different lines of activity. Evidence from the interviews suggests that labor market churn/turnover (estimated to be 25% annually) was an important mechanism for all sectors to bring innovation into the firm, whether that be the specificities of particular labor market processes or tacit and formal knowledge brought about via new cultural working practices or management structures.

3.3 The Importance of Personal Relationships

The defining characteristic of a cluster is the close proximity of related firms. We asked how this was advantageous (Table 5).

Table 5: The Importance of Close Proximity to Other Firms

How important are each of the following reasons for having a location in close proximity to other firms in London?	1	2	3	4	5	0	Total
It is easier to build and maintain personal contacts	12	15	46	123	101	7	1177
The ability to have face-to-face contact	14	15	37	108	117	12	1172
It is easier to build relationships of trust and cooperation	17	33	71	98	73	13	1053
It is easier to communicate because we have a common understanding of the business	27	33	67	108	51	17	981
We generally have complementary expertise with such firms	24	47	101	80	34	19	911
Multi-disciplinary teams can be assembled more quickly	30	46	73	86	41	27	890

The supreme importance of maintaining personal contact and being able to interact face-to-face is clear. In the questionnaire survey as a whole, the importance of maintaining personal contact and being able to interface face-to-face were the second and third most highly ranked factors. The compactness of the City also aids the ability to establish relationships of trust. There are no significant differences between lines of activity regarding the importance of trust. The existence of common understanding and complementary expertise are classic characteristics of dynamic clusters and are much in evidence here. Larger firms are significantly more likely to rate trust and ease of communication as being important and have a distinct, though not quite significant, tendency to rate personal and face-to-face contact as being highly important.

The importance of face-to-face contact was underscored by the interview survey, which cast light on why it is important. Several firms emphasized the importance of a face-to-face meeting for conducting complex transactions where it is important to fashion agreement while reducing the chances of misunderstandings or creating antagonism. A face-to-face meeting has the advantage that more information is conveyed, including

important non-verbal signals which are important, for example in trying to judge whether someone is honest and trustworthy or in gauging whether someone is unhappy or becoming upset. At the stage where deals are being transacted, a crisis can emerge at any time and there may be a need for a meeting to sort the matter out quickly and satisfactorily. In comparison, e-mail is a poor substitute. One firm suggested that this requirement meant that it was important for senior staff to be based in London. Similarly, several firms cited the need to be close to regulators, including the Bank of England, in order to have the ability to meet face-to-face to resolve important issues and to cement an ongoing relationship. The overall impression gained in the interviews is that there is a deep rooted need to conduct certain business face-to-face. One firm stated explicitly that simply the knowledge that it would be possible to call a snap meeting is important, even if such a meeting is eventually unnecessary. The importance of being able to meet people before doing business with them, to establish relationships and trust, to provide a customized service and conduct negotiations was also widely emphasized.

Proximity is an advantage in terms of the ability to have face-to-face meetings because it allows meetings to be called at short notice and it is possible to have a greater frequency of meeting because time and money costs are less than if some people have to travel long distances. Being able to meet more frequently helps build a team. A number of firms in banking and legal services commented on the need to have adequate space for large meetings because the size of meetings had grown as transactions had become larger and more complex, leading to larger numbers of professionals being involved in negotiations. Several firms emphasized that while there has been a burgeoning use of e-mail and video conferencing for intra and inter-firm communication, neither of these media would ever replace the need for physical face-to-face meetings. One respondent reported on the vastly increased use of video-conferencing and e-mail within his own firm, but also on the simultaneous immense pressure on the firm's meeting room space. Several respondents commented that e-mail and video-conferencing work much better with people you know, so face-to-face meeting will continue to be important in forming relationships that can subsequently rely on more remote media of communication. As one respondent remarked:

Face-to-face is very important, absolutely, you're never going to replace face-to-face contact you can't pick up body language; you can't build relationships truly over the

phone and with video-conferencing. They help because they make things more efficient but it's never going to replace the face-to-face contact and that's face-to-face contact in all aspects, even internally there is a point when you have to go and meet people even if you've seen them on a video-conferencing basis because you don't get a feel for that relationship aspect.

It is important for firms to be able to meet, especially with their top-level clients who require, and are prepared to pay for, a premium service. This may include receiving visits from back office as well as client-facing staff. One insurance firm emphasized their clients' need to meet the person who will be dealing with their claim in the event of mishap. Several interviewees emphasized the importance of trust:

Trust is very important and there's a price attached to that. We do a great deal to try to preserve and maintain our reputation and credibility and reliability.

The compactness of the City also means that it is possible to have a greater density of interaction. This has a number of benefits. Important among them is the ability to build a relationship and allied to it the ability to build a reputation.

We know most people in the City involved on the property side and just walking through the City you'll meet people that you know and its important to have that relationship to know what's happening in the market – people you can trust, people you can use to advise you. And it's important with all the people that you deal with to have that regular contact ... a lot of activity ... is done ... through personal contact ... its done through talking to people.

The compactness of the City is an advantage in terms of serving overseas customers, since it affords them the chance to come to London and have meetings with all their advisers and perhaps also meet a range of different banks, for example. Talking about international clients, one firm stated:

If you're talking about corporate finance, big finance, you want to get together in a room. So if you have a community like London where you have lawyers and accountants and investment bankers all operating, then the client will tend to come to you. There may be meetings where you say you want to go and see them, for example in areas of the UK outside London, but at the execution phase then you would tend to do that near the people who drive the execution process – that tends to be the bankers and the lawyers for example, where documentation is being produced.

An important benefit of the density of information which physical propinquity allows is that knowledge flows more easily. One respondent bemoaned the demise of the “City lunch” which was seen as a powerful way of ensuring people knew what the key developments in the market were. Another respondent explained:

You want to be able to meet with your biggest customers over lunch – take the head of x out to lunch and see what he thinks – and it’s being able to say to someone – look I’m going to be walking past your building this morning. I’ll just pop in and see what you’re doing about this, that and the other – again it boils down to human contact – if you want to keep your finger on the pulse and in the loop – you can’t get that from the trade press and so ... actually a lot of that comes from dinner parties and cocktail parties – its informal but that’s what you miss if you’re not in the loop.

Another benefit of dense interaction is that people become socialized in the sense that they absorb norms of doing business as well as the language in which business is done.

There is a significant tendency for accounting, and to a lesser extent legal firms, to rate their complementary expertise as being important. Somewhat surprisingly, no fund management firm rated this factor as being important or very important. There are also significant differences in the frequency with which firms rate ease of communications due to a common understanding of the business as being important, with banks and to a lesser extent insurance and legal firms rating this factor as being important more frequently and investment banks and fund management firms rating it as being less important. There is some tendency for the ability to build and maintain personal contacts to be rated as very important more frequently by banks and legal firms. The ability to have face-to-face contact tends to be rated as very important most frequently by insurance firms as indicated by the following remarks:

Lloyds is still very much a little village where everybody communicates with each other and in insurance generally. All the badge players have to know each other and have to know what they’re doing or they’re going to go out of business.

The importance of personal relationships is reflected in Table 6 which contains the most highly ranked group of factors. It might appear at first blush that the fact that telephone and e-mail are the most highly scored ways of having important interaction with staff in other companies belies the need for physical proximity. However, taking these responses together with those in Table 5 casts doubt on this conclusion, since important

interaction is likely to hinge on common understanding, trust and complementarity of expertise. Moreover, one is likely to interact more frequently with those with whom one has a more intense personal relationship. Meeting socially, whether by chance or design, is palpably of great importance. Mixing at business events and telephone contact for information is significantly more likely to be rated as important by banks and larger firms. Contact for short-term problem solving tends to be emphasized by management consultancies who have a disproportionate tendency to rate this as very important, however the difference is not significant. Banks and investment banks also have a tendency to rate contact for problem solving as important more frequently than other types of activity. The interview survey revealed that while chance meetings were not emphasized as a key driver of location decisions, they were an important benefit of proximity. The kind of things discussed in chance meetings tend to be industry gossip about what particular firms or people were doing, what key developments are taking place and sometimes bouncing ideas for new products or services.

Table 6: Methods of Interaction between Firms

To what extent has your firm benefited from the following types of interaction with personnel in other companies?	1	2	3	4	5	0	Total
Contact by telephone for information e.g. about a legal matter, a technical question, the name of a trade contact	16	24	74	116	67	7	1085
Contact by telephone/e-mail for short-term problem solving	19	26	76	104	73	7	1080
Mixing with industry colleagues in social settings	22	36	78	95	66	9	1038
Mixing at local business meetings/events	17	38	74	103	62	11	1037
Chance meetings where you hear interesting information	28	52	76	89	56	5	996

Results from the interview survey entirely corroborate the questionnaire survey regarding the importance of social relationships in sustaining the cluster and the significance of specific meeting places where interaction occurs. These interview excerpts demonstrate the existence of both “old” and “new” practices of interaction in the cluster and articulate the importance of both tacit and formal knowledge transfer in the cluster via business and social interaction amongst all sub-sectors:

I think there's still a circuit. There's a circuit where senior chaps meet whether it's dining in clubs or getting invited to events by the Corporation of London or whoever it is, there's obviously client entertainment – there's a huge merry-go-round at all levels. For example whether it's the printing firms inviting the junior people ... or the chief executives going to Glyndebourne [a highly regarded opera house situated 54 miles south of London] – that whole scene is very much alive and well.

New ways are down the sports club rather than the old clubs – down the gym. It needn't be the boozy lunch – it's places people want to go. The City has lots of good restaurants and clubs and stuff and who wants to belong to a club it takes four years to get into? It's a bit stuffy. Now it's all about a balanced lifestyle type of networking – this is what we're into.

Finally, the interview survey highlighted that being able to physically walk between firms, institutions, professional bodies, bars, gyms etc. was of great significance in sustaining both face-to-face contact especially in the compact geographical area of the City. As one bank emphasized, “physical walking distance is still important in the City”, and the over-riding view of the interviewees was that being able to walk to clients, suppliers, markets etc. remained one of the immeasurable locational advantages of the cluster, with anything up to 15 minutes walking time being considered as acceptable for traveling to an appointment with ease.

3.4 Sources of Help with Innovation

Table 7 sheds light on the types of local relationships that help innovation in the cluster. A pool of skilled labor and customers are the two most important factors, and both are very highly ranked.

Larger firms are significantly more likely to rate the labor pool as being important while legal firms have a tendency to rate help from customers as important, but not significantly so. Banks and insurance firms have a tendency not to rate customer proximity as important so frequently. Local suppliers and firms that provide complementary activities are also important in helping firms innovate. Both banks and insurance firms are more likely to rate the presence of such firms as important than firms in legal services. Firms in the same line of activity also assist to an appreciable degree in innovation, a phenomenon well documented in the case of manufacturing and it is interesting to find evidence of it in the service sector. As revealed in Table 8, banks are significantly more likely to rate the

presence of other banks as making an important contribution to innovation. The same tendency is evident for fund management, but not for management consultancies. Larger firms are significantly more likely to rate the presence of other firms in the same line of activity as being important. Banks are also significantly more likely to rate the presence of firms who supply complementary goods and services as being important to innovation.

The same tendency is more weakly evident for investment banks.

Table 7: Local Relationships and Innovation

How important are the following types of local firms/institutions in helping your firm achieve innovative solutions?							
	1	2	3	4	5	0	Total
A pool of talented labor with relevant skills	19	31	42	79	111	22	1078
Customers	21	38	60	69	102	16	1063
Firms who help you supply your service/product	28	44	80	71	58	26	930
Other firms in the same line of activity	38	64	96	67	18	20	812
Industry associations	65	72	77	44	18	29	706
Academic institutions	98	85	55	24	10	33	579
Local government	139	63	28	16	7	51	448

Table 8: Presence of other Firms in the Same Line of Activity in Promoting Innovation

		Not important	Moderately important	Important or very important	TOTAL
Banking	Count	8.0	18.0	18.0	44.0
	<i>Expected Count</i>	<i>14.5</i>	<i>16.0</i>	<i>13.4</i>	<i>44.0</i>
Insurance	Count	18.0	23.0	16.0	57.0
	<i>Expected Count</i>	<i>18.8</i>	<i>20.8</i>	<i>17.4</i>	<i>57.0</i>
Legal services	Count	20.0	17.0	18.0	55.0
	<i>Expected Count</i>	<i>18.2</i>	<i>20.0</i>	<i>16.8</i>	<i>55.0</i>
Investment banking	Count	6.0	7.0	7.0	20.0
	<i>Expected Count</i>	<i>6.6</i>	<i>7.3</i>	<i>6.1</i>	<i>20.0</i>
Fund management	Count	3.0	6.0	8.0	17.0
	<i>Expected Count</i>	<i>5.6</i>	<i>6.2</i>	<i>5.2</i>	<i>17.0</i>
Management consultancy	Count	18.0	8.0	2.0	28.0
	<i>Expected Count</i>	<i>9.3</i>	<i>10.2</i>	<i>8.5</i>	<i>28.0</i>
Accounting	Count	5.0	7.0	3.0	15.0
	<i>Expected Count</i>	<i>5.0</i>	<i>5.5</i>	<i>4.6</i>	<i>15.0</i>
Total	Count	78.0	86.0	72.0	236.0
	<i>Expected Count</i>	<i>78.0</i>	<i>86.0</i>	<i>72.0</i>	<i>236.0</i>

3.5 Interdependencies

Figure 2 gives an impression of sub-sector interdependencies. The figure was constructed by first classifying each firm to a sector on the basis of what it classed as its most important line of activity (question 1 in the questionnaire – see Appendix 2). The next step was to examine which sub-sectors those firms needed to have a relationship with (question 8 in the questionnaire). 74 firms did not provide a ranking, but rather ticked three or more boxes. These were excluded from the analysis which focused only those ranked 1. The arrowheads show the direction of the relationship with the arrowhead entering the sector rated as the most important to have a relationship with. The thickness of the lines indicates the percentage of number 1 rankings for each sector as per the key provided. It is important to bear in mind that the diagram conveys no information about the number of rankings, for example there were only five valid rankings made by market research firms, one of which went to banking (20%). The figure should be viewed in conjunction with Table 9 which gives the absolute number of number 1 rankings.

Figure 2: Sub-Sector Interdependencies

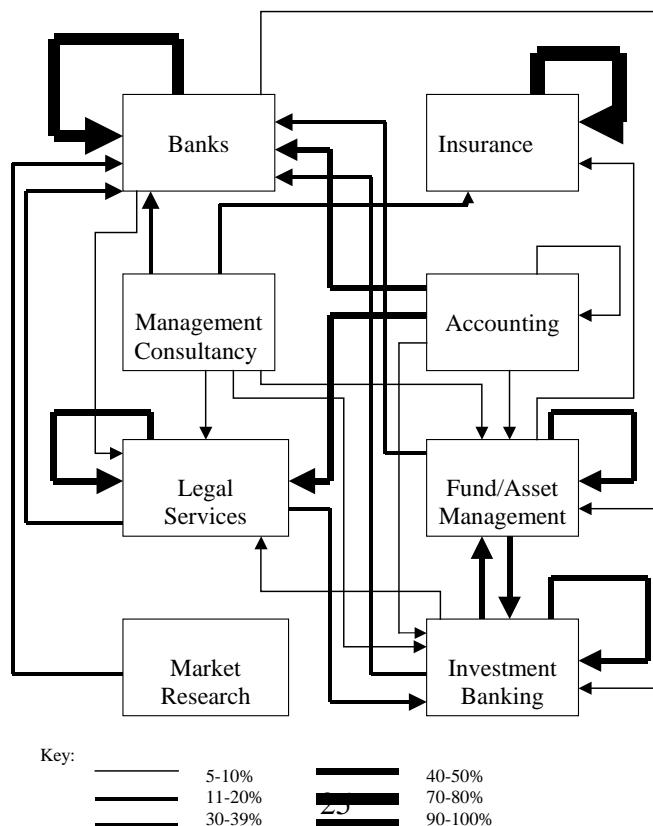


Table 9: Very Important to Have a Relationship With

	Number of Times Ranked	Percentage of Total Ranks	Number of Times Ranked by Other Sectors	Percentage of Times Ranked by Other Sectors
Banking	52	26.1	23	23
Insurance	47	23.6	8	8
Maritime	4	2.0	4	4
Management Cty	2	1.0	1	1
Accounting	4	2.0	3	3
Legal Services	35	17.6	15	15
Advertising	1	0.5	1	1
Fund Management.	15	7.5	12	12
Recruitment	2	1.0	2	2
Publishing	1	0.5	1	1
Market Research	1	0.5	1	1
Property	3	1.5	2	2
Printing	0	0.0	0	0
Investment Banks	24	12.1	19	19
IT Related	4	2.0	4	4
Electronic Info.	2	1.0	2	2
Telecomms	2	1.0	2	2

Taking the table and the figure together a number of features stand out. Firstly, banks, including investment banks, appear to be at the hub of the cluster. This is true to a lesser extent of legal services and fund management. Secondly, there is a very high incidence of sub-sectors ranking relationships with firms in their own sector as most important, especially in banking and insurance. Thirdly, some sectors, most starkly accounting, appear to depend more on other sectors than other sectors depend on them.

The interview survey revealed further insights into which firms are most valued as neighbors. One general feature of the interview evidence is that being close to customers is the most important factor. The question then arises of who the customer is. For many firms it is a question of derived demand, they get work from other firms in London who are themselves servicing a corporate or private customer. For many firms, access to IT specialists is a crucial issue. Law firms need to be near banks, including investment banks, and insurance companies from which they draw much of their work. Insurance lawyers are heavily concentrated around Lloyds. For law firms there is an added factor that they also need to be close to the courts.

The original reason we came here will have been very much influenced by the fact the old merchant banks were here – what we now call the investment banks. Investments

banks are a source of work and a source of clients and that's always been valuable for practices like ours. Being here is all tied up with London as a prime international center – there's absolutely no doubt about that. There's no other place in the world where it would be logical for us to have the most number of people. And that is entirely tied down to London's international standing because our focus has always been City related work and the City related work now is of such huge importance internationally. So we're very dependent on London retaining its status and therefore London remaining attractive to the key banks.

Where international customers are concerned, “closeness” relates to the fact that being in the center of London puts a firm on their beaten track, so while not close comparing HQ to HQ, they are close in the sense that they are regarded as easy to access. Another advantage which works to the benefit of the cluster is that having a range of firms in the same line of activity in close proximity means that there is a strong competitive spur driving firms to innovate, drive up service quality and to keep down costs.

As financial services become more standardized and novel products or services are easy for rivals to copy, so firms are competing on service differentiation. There is a need to be close to the client in order to work out bespoke solutions and to provide a high level of personal service. One firm put great importance on being able to get their clients to visit their premises so that they could get a rich experience of the nature of the firm with whom they were dealing. In some businesses it is important to be near clients in order to cut down on the time and money costs of visiting clients. This factor was above all stressed by accounting firms, where staff spend a particularly large proportion of their time with clients.

One advantage of being close to other firms in the same line of business is the ability to work out solutions and share risk:

There is an awful lot of business that is done which is joint business between institutions. There is more and more now of large transactions which are done jointly and the risk is spread then between different organizations. So there's a need not only for you to get yourself together with a client but to get those proposing the solution together.

Being close to other types of firm which provide complementary services is important because it enables multi-disciplinary teams to assemble quickly to meet client needs. It is also convenient for clients, particularly those who travel some distance to London, to be

able to see a range of their advisers quickly and efficiently. Several respondents pointed to the need to draw together complementary expertise to work out novel and bespoke services for clients. It was judged to be less likely the case that a client would have a pure financing or pure legal requirement. Another benefit of being able to draw in complementary expertise quickly and build and maintain relationships with those who provide complementary expertise is that firms will recommend each other to clients. It is therefore important to be in the loop in London in order to tap into this source of demand:

I think it was the case that you had to be in the City because of the need to physically interact. There were certain financial transactions which had to take place because of the time criticality – discount market members and messengers used to carry pieces of paper from one bank to another and they had to be in before 10 o'clock. With electronic banking that doesn't happen but there are other reasons why people still need to be in the City ... Proximity and face-to-face contact are essential in the investment banking business. There are those that argue against it because clearly the very successful global investment banks – xx and others – they've all got huge places down at Canary Wharf and they don't feel that necessity [to be in the City]. But we feel comfortable here – we're close to the Bank of England, lawyers and accountants, the regulators who advise us. It's inconceivable to me ... that we would do anything other than stay in the City.

The above quotation illustrates an important point made by several respondents, that the historical reasons for being in their current location are different from the reasons they continue to stay in their current location. Two respondents put it this way:

There's one thing I think we covered by implication is that it's not only where your clients are, it's where your suppliers are. And that's suppliers across a broad range from the professional suppliers like lawyers and consultants and accountants through to all the other suppliers.

First of all if you have a center which is relatively tight and you want to draw together a meeting of three disciplines then it's very easy and very quick. If people are distributed around, it takes longer and we have to be fast in financial services to be able to move quickly. It works in a number of ways. If you want to do something which is a collection of different people for a trade association ... you want to pull people into that meeting. You don't have to spend a lot of time out of the office to get to that meeting ... So you get much more cohesion from people turning up at these meetings if the transport time is shorter – that's one reason why you have people in close proximity. You can draw people together very fast. Equally if you want to have a

seminar or lunch – it's important people can leave the office and come back in the afternoon – there's a convenience point of view.

3.6 Disadvantages of a London Location

The two most pressing problems for firms in the London financial services cluster are the cost of premises and transport difficulties, local, national and international (Table 10). The cost of premises is the single most highly ranked factor across the whole questionnaire. However, this finding needs to be interpreted with care. To an extent, a cluster's success can be measured by increasing rents. The key question is: does this lead to the movement of valuable activity out of the cluster? As discussed in the next section, we found the answer to this question to be “no”. If activity does move out, it tends to be less valuable activity.

Table 10: Disadvantages of a London Location

To what extent is London's economic growth impeded by the following?	1	2	3	4	5	0	Total
Cost of business premises	8	19	64	110	103	5	1193
State of the underground	14	29	59	84	114	8	1155
National transport links	23	34	67	85	89	10	1077
Government regulation	29	41	66	68	80	22	981
International transport links	39	48	79	55	65	20	917
Local infrastructure (including buildings)	26	63	92	69	39	14	899
Environmental quality and pollution	43	72	99	48	20	26	776
The UK's current position outside the Euro zone	82	76	57	29	26	37	651
Availability of staff with language skills	73	68	69	41	12	44	640
Access to venture capital	101	52	50	15	8	80	455
Other	0	0	1	2	13	3	

The inadequacies of the transport system was born out by the interview survey, with almost every respondent mentioning it and a number wanting to dwell on this single issue. While the cost of office premises was considered a disadvantage, it was not prioritized as a threat to the cluster. Transport however was widely seen as “a massive all-encompassing problem”. This respondent’s comment illustrates the strength of feeling expressed by many on this subject:

Public transport is the end. The dispute between the DLR [Docklands Light Railway] and the Jubilee Line for example. Technology is a mess in and out of London – it’s disgusting, unreliable and uncomfortable. I hate traveling in and out – the bit here to Tower Bridge is the worst – the City is seized up. We’ve worked very hard to make things happen. France, Germany and Spain have much better transport … The problem is there’s no consistency in policy, someone needs to be responsible.

There is a crucial issue regarding the ability to cross London especially for business trips. Some respondents pointed to the example of the investment bank Lazard moving to the West End, where most of its major corporate clients are, to avoid the inconvenience of traveling between the City and the West End for meetings. Conversely, one respondent in a fringe location spoke of the intention to move to an office in the City in order to overcome the difficulty of traveling to clients there.

In terms of travel to work patterns, being located to any degree North, South, East or West of the center was perceived to limit the geographic scope of where staff would travel from. To some extent this was more limiting at lower levels in the organization as the senior staff had the wherewithal to pick a more favorable residential area with a view to travel to work. Many respondents expressed their concern about the impact of vexing and lengthy commutes on their staff, sapping energy and enthusiasm. In addition to over-crowding and unreliability there were adverse comments on the sheer shabbiness of the underground, and concern was expressed regarding the safety of the electrical installations. As the following quotations illustrate, while the cost of housing in London was not seen as a key issue threatening the cluster, transportation difficulties were.

I don’t think [London housing] costs are higher. Actually the costs are less. Our costs of people living in Singapore or Hong Kong, even Moscow, are just as high as in London. They’re less in Germany, slightly less in Paris. They’re certainly less in Amsterdam but I wouldn’t have said that is a factor at all.

I hear lots of complaints about transport, I hear less about houses. People seem to cope with housing just by moving further out. Then they get clobbered by the transport system – you become more and more reliant on having an efficient transport system which we manifestly don't have.

Within the “square mile” of the City there is less of an issue regarding transport, since people can walk to appointments. However, the problems of traversing the center of London, particularly East-West, were identified by many respondents as a key concern. The following quotation illustrates the nature of the concern, which turns on the unpredictability of travel and the cost in terms of wasted time and energy:

How much time is wasted? A lot of time and money and someone should add it all up ... All the routes East-West constantly jammed up. The tube incredibly unreliable, breaking down – the Central and the District Line. And if you're trying to get from or to Heathrow, you're in one of these traffic jams – it's getting to people.

The major concern regarding international travel is access to airports, especially the City-Heathrow link and to a lesser extent the reliability of transport once the airport has been reached. One respondent based in Canary Wharf reported leaving three hours before a Heathrow flight, and clearly regarded this as being unreasonable. One respondent who expressed an opinion on whether the problems of international travel stopped people coming to London expressed doubt that it would. Nevertheless, there were references to meetings being delayed or cancelled because people arriving on international flights had difficulty getting from the airport to the meeting. One thing which to some extent overcomes the problems of getting, for example, from Heathrow to the center of London is that, once there, it is possible to efficiently arrange a series of meetings with firms in close proximity.

City Airport is good, it's nearby, but getting to City Airport is a complete pain and people's experience generally of flying out of City Airport is that you're always delayed.

The accessibility of Heathrow and Gatwick from the City is a problem. If you look at where those links go to – you're talking Victoria, London Bridge ... The Heathrow Express has made it considerably easier to get from Heathrow to Paddington but then

you've got the nightmare of trying to get from Paddington to the City which can take three times as long as getting from Heathrow to Paddington.

The poor state of the transport infrastructure is something which is perceived to create a negative impression of the City for international clients.

International clients traveling to London are pretty shocked at times because the infrastructure is so bad, lack of investment, how shabby it is, how poor the service is.

Considerable dismay was expressed by a number of respondents regarding the failure to develop a coherent policy to improve public transport in London. Anger was expressed by several at the attempts by the Mayor of London to cajole people into using cars less and public transport more when the public transport system was already inadequate.

Furthermore, unfavorable comparisons were made between the public transport system in London and the systems in Paris and Frankfurt. Only Tokyo received a mention as being worse than London. One respondent who had worked 35 years in the City judged the decline in the standard of public transport over that period to have been "enormous".

Another stated that he had abandoned the District Line after 30 years in favor of his car because of a continual decline in standards. A number of respondents made the point that they had to be located in the cluster and were therefore forced to put up with declining transport conditions but that others may have a choice. One banking respondent said that until the firm's confidence in transport infrastructure increased, no new business activities were being brought to London. The view of an auxiliary financial services respondent summarized a common perspective,

What you've got to avoid if you've got a city and you're trying to protect your franchise is you've got to avoid the feeling that if you don't have to come into London, why bother.

While transport was singled out as a key problem by almost all respondents, many also commented on regulation and legislation as being an even more serious potential threat to the London financial services cluster. A principal concern related to European legislation which, crudely stated, was seen as likely to lead to a leveling down of London particularly in relation to the erosion of flexibility, damaging the ability of firms in London to "get the job done". One respondent referred to the threat as, "death by a thousand cuts". Shedding

light on questionnaire responses on the Eurozone, the UK's failure to adopt the Euro was not regarded as an issue but UK involvement in European policy and the promotion of a single market was seen as highly important. Another issue was the risk posed by "over-burdensome" and complex UK regulation leading to increasing amounts of working time having to be diverted in trying to keep abreast of requirements. One respondent described the nature of the problem thus:

Monday to Friday I'm dealing with the queries put on me by the central regulators and the rest of the week I can spend doing my job.

On the other hand there was a clear recognition that effective regulation is essential to maintain the credibility of the financial services sector. The main message that came across was the need for balance. The following quotations illustrate regulatory concerns:

It is just overwhelming, impossible for anybody to understand the complexities of the modern regulatory system. The regulators don't understand it, the regulated don't understand it ... the ability to move and do things for our clients – there are now just whole areas where we just now would refuse to act for people just because, unless it's a really large amount of money, it's just not going to be justified by the time we've got through the paperwork.

There comes a point in time where the degree of regulation has got to such a degree that they're turning people off coming to the City and that's a very fine line.

European legislation, employment and social is a nightmare – it worries us and its all part of the chipping away. And it's the things I deal with all the time – the prospectus directive – all these directives from Brussels which we're having to work incredibly hard on.

Of course part of the attraction to many people is the relatively low direct rates of taxation but if in fact there is an increasing bill on the indirect taxation whether its rates, property tax, whatever, then you're going to tilt the balance the other way too much and I think that's something the Government's got to be very, very conscious of.

A current concern that was commented on frequently in the interviews was the vulnerability of London to terrorist attack. Some firms emphasized the importance of adequate contingency plans to cope with a major disaster. Nevertheless the concerns in themselves were not discussed as a serious threat to the cluster. The comment, "I think people have short memories with that sort of thing" summed up the general feeling. However, one respondent believed that, were a major attack on London to take place, this

could provoke a movement out of London. A number of other issues were occasionally mentioned as being negative aspects of London, such as street crime, untidiness and restrictive City planning regulations however these disadvantages appeared to be second order.

3.7 Declustering

In addition to exploring the advantages and disadvantages of London clustering, the interview survey specifically addressed the factors that push firms to consider relocating part or all of their activity away from the cluster.

In general, a location outside London in the South East or elsewhere in the UK was considered viable only for non-client facing staff. Firms involved in dealing felt that they still needed to be in the London cluster because these activities had been “much less dematerialized” than other types of activity. However, several firms sounded a note of caution about the extent to which even back office functions could be spun out from the City. Some back office functions are purely routine and these lend themselves to declustering. Many such activities have indeed already been relocated. Other back office functions are specialized and depend upon knowledge of City practices and knowledge of the client. These operations are not candidates for declustering. More fundamental perhaps than the front office/back office or client facing/non-client facing distinctions is whether or not the particular activity is routinized or commoditized as opposed to being bespoke or complex. If business activity is commoditized or routine it is amenable to declustering. But even then, it is not straightforward:

We haven’t reached that stage in the circuit yet – we have presently the back office staff for the London business here in this building and it is not too difficult to ask the question – do you need to have a back office near x? What benefits does it bring? Back office has no customer connection etc., with IT you can do it anywhere. The question is, would you find, in Milton Keynes, skilled staff? Because back office is not anymore manual, routine, repetitive – you need quite a number of skills – and if you couldn’t find those people in Milton Keynes would they be prepared to move there?

Of the back office, there would be some functions you could ship out – finance, to a certain extent some admin. But the analysts need to have a central location where you can catch that extra piece of information. There’s a balance – the senior members of those back office functions should be talking to the back office of the client. It’s all

very well selling something to the end user, you've then got to make sure you can deal with that effectively. So they need to be discussing those particular elements, they also need to be able to take feedback from the users in much more detail than comes through the sales people.

Even when relocation made sense, it also made sense to maintain some presence in the center of the cluster. As one insurance respondent put it "The City still has the connotation of – good address, got to be there at the center". An auxiliary financial services respondent took the view, "Every firm worth its salt operates with headquarters here in the City".

Some firms made the point that in order to get a substantial benefit in terms of lower costs they would now need to move quite some distance from London, probably outside the South East but as the following quotations illustrate finding a move which is truly cost-effective is not always easy:

There are firms that have successfully broken the mould, they've moved away from London to other places in the UK but it's not an absolute given. So if you were to look at x's experience in Lewisham what they found out is that they didn't move far enough so people still have to get on a train to get to Lewisham and why would I want to work in Lewisham – why not go three stops further and work in London again? The opposite of that is x which took all of its back office staff down to Bournemouth which worked very well. But the converse of that would be when x and x went to Dublin where the labor market was just too small and too tight and although they had cheaper occupancy, they were paying over inflated rates for labor. It's a pretty mixed bag of the positives and negatives of the people who've moved away from London.

These days it is hardly worth bothering unless you're moving to Birmingham or north of it to get the savings and obviously that increases the risk. Which is why – good news for London – I think most of us are still here ... The reality of life is anything international, whether you like it or not, this is not that big a country and so there's an incredible focus on London and coming to London and people understand that if you said our Head Office is in Blackburn you'd get a blank response from an international point of view and there's no point in trying to dress it up.

Several firms expressed an opinion on whether the promotion of financial services clusters elsewhere in the UK would be viable. Most were skeptical, pointing to the business reasons for continued concentration in London. One firm stated that the City is made up of mini-clusters anyway, of insurers and lawyers for example. It would therefore be impossible to transplant the mini clusters and maintain their important juxtapositions. A range of other comments suggested the need for careful consideration of plans to establish

any new clusters that are not in close proximity to existing concentration as illustrated by the following interview extracts:

We (the UK) won't be able to afford to put up new infrastructure projects in Huddersfield or Glasgow if the UK plc doesn't make the money that it needs to in London. If London is seen by certain people in government as just another English city – disaster.

We did look at moving to Reading and we looked at the costs of moving there as opposed to staying in the City ... it's the services, security, suppliers etc., etc. which wouldn't be available outside the concentration ... Without IT infrastructure and specialists we die.

If people say, we don't like what's going on in the City, we're going to create a new financial industrial complex somewhere, say Reading, that's engineering, that's not going to work.

What you have in London is a European regional center servicing the largest companies in Europe. For example, even a large global investment bank which has let's say 250 people in Frankfurt, they will service German companies part out of Frankfurt but they'll still service them out of London as well and that isn't going to happen from Manchester.

For a US company, given the choice, they could just about get their mind to Windsor i.e., outside London but if you said to their employees in Atlanta, we're moving you to Blackburn to work in our European head office, they'd all head for the hills.

We considered as part of our strategic plan for this area whether we might review the lease on this building given that a lot of the building is used for back office activity. And perhaps it wasn't necessary to be bang in the middle of the City and we didn't want to go to Croydon or Bangladesh or Manchester, so we thought about London Bridge.

I suppose I see Canary Wharf more as overspill than as a separate cluster ... it is surprisingly difficult to get people in different offices to act as part of the same team ... we have one big x office in the UK and it's much more cohesive (than between offices in 7-8 German cities). I think if that sort of competition between regional centers is replicated, it must damage the whole.

4 Conclusions and Policy Recommendations

The principal conclusion of this study is that London has a dynamic and successful financial services cluster which works in line with extant knowledge of the clustering phenomenon. Clustering continues to be important in spite of the costs associated with

demand for a limited supply of highly centralized space. The market drivers and interdependencies associated with the geography of clustering in London are complex. This suggests that public policy to promote the benefits of the financial services concentration will be better directed at facilitating the operation of established clusters rather than master planning new clusters.

Banks and to a lesser extent law and fund management are at the hub of the London cluster, therefore particular weight needs to be placed on the requirements of these sub-sectors as many others in the cluster depend on them. Access to the concentration of labor, customers and professional and government institutions is a critical advantage of proximity within the cluster. Maintaining London's attractiveness as a location for these activities should be a key policy priority. The labor market is of fundamental importance to the cluster, therefore making the labor market attractive and fluid is a top priority. The ability to walk to appointments in the City is seen as being highly important due to a combination of the need to establish and build trust, the need to meet face-to-face to thrash out complex problems quickly and the sheer convenience of being able to meet quickly without undue loss of time. Transport and regulation are the key policy areas where businesses see a threat to London and are urgent policy issues.

In the following, conclusions and policy recommendations specific to the main themes of the paper are presented.

4.1 The Labor Market

The scale and depth of the labor market is a crucial advantage. The attraction of London as a major metropolis and cultural center is important in drawing in labor, especially international labor, hence there is a premium on keeping London's amenity and reputation in these areas up to scratch for the good of its commercial success.

The labor pool is embedded in the cluster and is the place where the knowledge and expertise which give London its supreme position in financial services reside. Being near a strong, skilled labor supply is particularly emphasized by key hub firms. A further advantage of the labor pool which draws firms to have operations in the cluster is the flexibility of the labor market by international standards. The policy implication is that a

watch needs to be kept that this advantage of labor flexibility is not eroded by over burdensome regulation.

The relevant labor market for many staff is heavily circumscribed by the choice of the firm's location and the feasibility of commuting there. This is an argument for a review of transport priorities as the labor market will function in a more integrated way if people can travel more easily across the city. This consideration also has implications for the provision of new housing in London and the South East (where most staff live) - where it is built will bear upon which parts of the city have easy access to the labor force that will be housed there.

4.2 Personal Relationships

4.2.1 Face-to-Face Interaction

Almost all the perceived advantages of being in the cluster turn on the fact that being physically close enables face-to-face contact and relationship building to take place. E-mail, telephone and video conferencing, while extensively used, are seen as complementing prior face-to-face interaction. Both formal and informal interaction is of great importance. It is notable that some respondents indicated that certain business might not take place at all if face-to-face contact were not possible. This is a powerful argument for keeping the cluster as compact as possible (possibly envisaged in terms of time and ease of travel rather than physical distance).

4.2.2 Knowledge Transfer

Proximity within the cluster produces a density of interaction and information that promote knowledge transfer. This is important for the dynamism and the ability of firms in the cluster to serve clients in high value added complex activities. Notably it is particularly emphasized by banks which occupy a central place in the cluster. Such knowledge transfer is effected by a variety of mechanisms all of which are promoted by compact space. Examples include: formal and informal meetings, labor mobility and chance meetings. The policy implication again is that it is important to maintain as far as possible the geographic compactness of the cluster. In terms of transport policy it implies that it is important that plans to develop locations near the cluster need to take into account ease of movement within the cluster.

4.2.3 Inter-firm Linkages

There is clear evidence of close and important inter-firm linkages among local firms, particularly those with complementary expertise, which above-all translate into the ability to provide high level services to clients e.g., by the ability to form multidisciplinary teams which can work well together quickly. The ability to form inter-disciplinary teams is particularly important in respect of client meetings and again a particular advantage of location in the cluster. The policy implication is that it is very important that the cluster remains multifunctional and diverse.

Proximity to the customer is highly important, perhaps more so than has been revealed in the existing clusters literature. This relates to major clients based themselves in or near the cluster, to firms who rely on other firms in the cluster for a derived demand for their services and also to the ease for international clients of doing business, perhaps with a range of firms based in the cluster. All three of these have the policy implication that it is important to maintain a compact cluster. It also has implications for transport policy. The convenience and efficiency of geographical propinquity are being undermined by problems of traversing the city. In terms of international clients there is the added issue of getting to London from airports.

4.3 Sources of Help with Innovation

Location appears to be most important in helping to develop new markets and better ways to deliver. The co-location of a pool of skilled labor and customers is an important stimulus to innovation. The link with innovation is particularly strong for banks. The implication for policy is that physical clustering of service firms and customers should be sustained and promoted to support innovation.

4.3.1 Institutional Thickness

Many firms in London benefit from being close to a relevant exchange and/or other important institutions such as a regulator or trade association. The policy implication is that the benefits derived from this source would be weakened by dispersing the cluster.

4.3.2 Role of Local Government

Banks more than other lines of activity find help from the local authority beneficial. This implies an opportunity for co-operative working between the banks and local government and it merits review whether ways can be found to reinforce this link.

4.4 Interdependencies

The balance of co-operation and competition between sub-sectors is manifested in the cluster as in the classic clusters literature. Large firms and banks place particular importance on being near other leading competitors as a feature of being in the cluster which helps maintain their competitiveness. This finding has policy implications relating to the benefits of the cluster specifically as a hub-and-spoke spatial form (Markusen, 1996).

4.5 Disadvantages of a London Location

4.5.1 Transport

Transport has already been commented on under other headings. This is highlighted as an extremely important concern of business with clear evidence that it is acting as a drag on the efficiency of London and possibly beginning to deter visiting international clients. While not imminently threatening the cluster it appears to be a high policy priority to ease the problems identified, in particular travel to work, travel East-West across central London and travel between Heathrow (and other airports) and the London cluster.

4.5.2 Regulation

Here the evidence was equivocal in so far as firms indicated that rigorous regulation was important in giving quality assurance to work done in London but many also expressed the view that regulation was becoming burdensome, indeed unmanageable. Regulation emerges as a particularly important concern for banks. The policy implication is that the regulatory burden needs to be reviewed and monitored in relation to rival financial centers. There is also a need for co-operation across agencies to ensure that contradictory effects on London's attractiveness as a place to do business are not created.

4.5.3 Cost of Premises

While the most highly ranked disadvantage in the questionnaire survey, the interview evidence implies it is more an annoyance to firms than a fundamental threat to the viability

of the cluster. It is not clear there is a policy recommendation here except to monitor property prices in relation to other financial centers.

4.6 De-clustering

It appears that it is the more routine/low revenue types of work that are the ones being spun out of London (and, to some extent now, the South East) due to high space and labor costs. Accessibility for skilled staff is a key reason for an office location in the cluster together with the need to have a credible address. Policy will need to take account of the fact that these are decisive reasons for firms not moving high order office functions away from the cluster and in particular from the City. Movement of certain activities out of the cluster should not necessarily be seen as damaging to the cluster overall. The research suggests that locational centralizing and decentralizing movements of, for example, back-office activities, are part of an ongoing evolutionary process that is important to the global competitiveness of the cluster. While Canary Wharf has provided much needed additional space for expansion, planned high-rise development and provision of flexible space, in relation to functional use, size and age/cost of office accommodation in the City were deemed to be important to meet future anticipated needs for dense clustering.

This research suggests that successful clustering can be facilitated or eroded by public policy. Government administrative and organizational boundaries, lack of policy co-ordination and focused management relating to regulation and transport were perceived by respondents to be a barrier to effective decision-making and investment. Co-ordination across policy and departmental as well geographical boundaries will therefore be essential to support sustainable financial services clustering in London.

References

- Agnes, P. 2000. The “end of geography” in financial services? Local Embeddedness and territorialization in the interest rate swaps industry. *Economic Geography* 76: 347-366.
- Audretsch, D. B. and Feldman, M. P. 1996. R&D spillovers and the geography of innovation. *American Economic Review* 86: 630-640.
- Baptista, R. M. L. N. and Swann, G. M. P. 1998. Do firms in clusters innovate more? *Research Policy* 27: 527-542.
- Beaudry, C., Cook, G. A. S., Pandit, N. R. and Swann, G. M. P. 1998. Industrial districts and localized technological knowledge: The dynamics of clustered SME networking. *Research Report 3.3 (Clusters, growth and the age of firms; A study of three industries: Aerospace, Broadcasting and Financial Services) for the European Community DG XII*.
- Best, M. 1990. *The new competition*. Massachusetts: Harvard University Press.
- Camagni, R. 1991. Local ‘milieu’, uncertainty and innovation networks: Towards a new dynamic theory of economic space. In *Innovation networks: Spatial perspective*, ed. R. Camagni. London: Belhaven.
- Capello, R. 1999. Spatial transfer of knowledge in high technology milieux: Learning versus collective learning processes. *Regional Studies* 33: 353-365.
- Cook, G. A. S., Pandit, N. R. and Swann, G. M. P. 2001. The dynamics of industrial clustering in British broadcasting. *Information Economics and Policy* 13: 351-375.
- Cook, G. A. S. and Pandit, N. R. 2002. Innovation, small firms and clustering: Insights from the British broadcasting industry. In *New technology-based firms in the new millennium*, Vol II. ed. R. P. Oakey *et al.* Oxford: Elsevier.
- Department of Trade and Industry 1998. *Our competitive future: Building the knowledge driven economy*, Cm 4176. London: HMSO.
- Gordon, I. R. and McCann, P. 2000. Industrial clusters, complexes, agglomeration and/or social networks? *Urban Studies* 37: 513–532.
- Henderson, J. V. 1986. Efficiency of resource usage and city size, *Journal of Urban Economics* 19: 47-70.
- Markusen, A. 1996. Sticky places in slippery space: A typology of industrial districts. *Economic Geography* 72: 293-313.
- Maskell, P. and Malmberg, A. 1999. Localized learning and industrial competitiveness. *Cambridge Journal of Economics* 23: 167-185.

McCann, P., Arita, T. and Gordon, I. R. 2002. Industrial clusters, transactions costs and the determinants of MNE location behavior. *International Business Review* 11: 647-663.

Pandit, N. R. and Cook, G. A. S. 2003. The benefits industrial clustering: Insights from the British financial services industry at three locations. *Journal of Financial Services Marketing* 7: 230-245.

Pandit, N. R., Cook, G. A. S. and Swann, G. M. P. 2001. The dynamics of industrial clustering in British financial services. *The Service Industries Journal* 21: 33-61.

Pandit, N. R., Cook, G. A. S. and Swann, G. M. P. 2002. A comparison of clustering dynamics in the British broadcasting and financial services industries. *International Journal of the Economics of Business* 9: 195-224.

Piore, M. and Sabel, C. 1984. *The second industrial divide: Possibilities for prosperity*. New York: Basic Books.

Porter, M. E. 1990. *The competitive advantage of nations*. London: Macmillan.

Porter, M. E. 1998. Clusters and competition: New agendas for companies, governments, and institutions. In *On competition* ed. M. E. Porter. Massachusetts: HBS Press.

Roberts J. et al. 2000. Knowledge and innovation in the new service economy. In Andersen, B., Howells, J., Hull, R., Miles, I. and Roberts, J. *Knowledge and innovation in the new service economy*. Cheltenham: Edward Elgar.

Saxenian, A. 1994. *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Massachusetts: Harvard University Press.

Swann G. M. P., Prevezer M. and Stout, D. (eds.) 1998. *The dynamics of industrial clustering: International comparisons in computing and biotechnology*. Oxford: Oxford University Press.

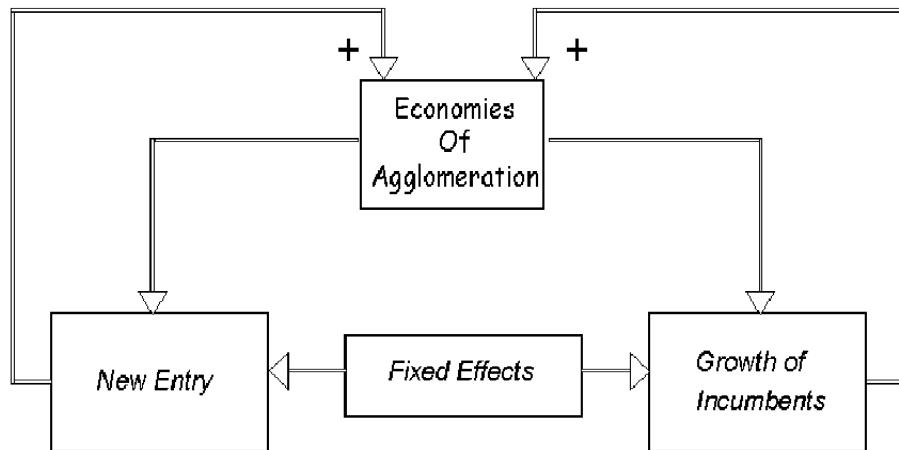
von Hippel, E. 1988. *The sources of innovation*. Oxford: Oxford University Press.

Wrigley, N., Currah, A. and Wood, S. 2003. Investment bank analysts and knowledge in economic geography. *Environment and Planning A* 35: 381-387.

Appendix 1: An Overview of the Theoretical Basis of the Survey Designs

Cluster theory maintains that a firm may be attracted to a cluster because of “fixed effects” (Swann *et al.*, 1998). These are benefits that exist at a location that are not a function of the co-presence of related firms and institutions and include, for example, climate, time-zone and cultural capital. These lead to cluster growth - new firms are formed and incumbent firms grow. Beyond fixed effects, there are benefits that are directly related the co-presence that exists within a cluster and these can be referred to as economies of agglomeration. These lead to further cluster growth and can be dynamic in that they increase as agglomeration increases. Hence the feedback loops in Figure A1.

Figure A1: Cluster Dynamics



From the perspective of the clustered company, cluster benefits can emanate on the demand or supply side. Also, costs associated with clustering can emanate on the demand or supply side. Generally, when benefits are greater than costs, the cluster grows (incumbent companies grow and new companies are formed); when costs are greater than the benefits, a cluster declines (Table A1).

Table A1: Cluster Growth and Decline Factors

	Demand Side	Supply Side
Growth	Customer proximity	Knowledge spillovers
	Reduced consumer search costs	Specialized inputs
	Informational externalities	Infrastructure benefits
		Better motivation and measurement
		Experimentation at lower cost
		Informational externalities
Decline	Congestion and competition in output markets (overheating)	Congestion and competition in input markets (overheating)
	Technological discontinuities	Cartels and over consolidation
	Changes in tastes and preferences	Powerful trade unions Stagnant local infrastructure

Cluster benefits on the demand side include customer proximity. The idea is that the company may reduce transactions costs by locating close to its customers. However, benefits may go beyond cost. Sophisticated buyers are more likely to exist in a cluster and these can encourage innovation by being demanding and by alerting suppliers of new trends and innovations (von Hippel, 1988). Such knowledge exchange between customers and suppliers can be problematic because the value of knowledge is difficult for users to gauge before they have acquired or absorbed it. Accordingly, it is difficult for a market for the exchange of knowledge to arise (Roberts *et al.*, 2000). Clusters allow for the development of reputation and of networks of trust between the parties involved and so provide a solution to this problem. The clustered company may also benefit from reduced consumer search costs. The idea here is that the firm is more likely to be found by customers when it is located in a cluster. This is particularly important when consumers have specific requirements (and so explains why antique shops tend to cluster). Information externalities on the demand side may also exist, that is, a clusters reputation rubs off on the company that is located in it.

On the supply side a major benefit is that knowledge spills over in strong clusters and this is particularly important when valuable industry knowledge is tacit and informally communicated (Howells, 2002). The effective spilling of tacit knowledge can lead to more prolific innovation. A second supply side benefit is access to specialized inputs. As a result, the company benefits from lower search costs because it can easily recruit from a pool of specialized labor and can tap into a specialized supplier base. Infrastructure

benefits can go beyond access to a good transport network to include institutions that coordinate activities across companies in order to maximize collective productivity, for example, trade associations which set standards and/or conduct marketing for the cluster as a whole (Porter, 1990). Better motivation and measurement can also exist within a cluster as local rivalry can act as a powerful spur (Porter, 1998). Also, it can be easier to measure performance against local rivals as they share a similar context leading to lower monitoring costs. Another important supply side benefit is that it can be easier to try out new ideas in a cluster since it is possible to gain instant feedback and all of the inputs (including sympathetic venture capital) required for experimentation are likely to be present in the cluster. Finally, a clustered company may benefit from informational externalities on the supply side: The firm enjoys lower risk by observing successful production at a location.

Cluster costs on the demand side are as follows. Other things equal, as the number of competitors increases, we would expect prices and so profits to fall. Also, a cluster specialized in a particular technology can go into decline if that technology is substituted. Finally, changes in tastes and preferences can lead to cluster decline. On the supply side, congestion and competition in input markets can lead to higher wages and rents which in turn could lead to movement out of the center of a cluster. Cartels and over-consolidation, powerful trade unions and stagnant local infrastructure are all potential decline factors as they can restrain competition and innovation and slow down productivity improvements. These potential supply side decline factors provide an agenda for government industrial policy.

Appendix 2: Postal Questionnaire Survey

ADVANTAGES AND DISADVANTAGES OF A LONDON LOCATION

1. How would you describe your company's major business activity? (Please rank up to three activities by entering a number in the relevant box, where 1 indicates the most important.)

48	Banking	60	Insurance	0	Maritime services	30	Management consultancy
16	Accounting	61	Legal services	0	Advertising	17	Fund/Asset Management
2	Recruitment	1	Publishing	8	Market research	6	Property management
1	Printing	21	Investment banking	2	Other IT related	5	Provision of electronic information
0	Telecomms		Other (please specify):				

2. How important are each of the following benefits of your location? (Please tick one box per benefit.) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
Your address is important to being perceived as credible	18	23	63	111	91	2	1152
You benefit from a strong, skilled labor supply	21	22	62	95	85	22	1056
You benefit from being close to market-leading customers	18	46	66	88	77	12	1045
Your customers external to London find it easier to locate you	32	42	72	98	46	15	954
You benefit from being near professional bodies	36	59	79	68	52	11	923
Knowledge transfer from the City's "financial atmosphere"	28	45	75	72	57	28	916
You benefit from being near leading competitors	49	58	63	73	41	23	851
Customers external to London find it easier to interact with you	45	58	87	62	35	19	845
Ability to find firms who will supply bespoke services	34	75	83	56	36	22	837
It is the best place to be to take market share from rivals	37	60	74	65	39	32	834
Proximity to a relevant exchange or physical marketplace	55	36	70	44	57	45	798
Ability to benchmark against competitors	67	68	72	43	23	33	706
Local rivalry amongst competitors is a powerful spur	63	70	69	44	18	42	676
Ability to access real time information on market trends	80	65	49	44	27	41	668
Support from local government	119	66	33	13	11	64	457
Access to venture capital	113	46	31	13	11	90	405

3. To what extent is London's economic growth impeded by the following? (Please tick one box per factor).
Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
Cost of business premises	8	19	64	110	103	5	1193
State of the underground	14	29	59	84	114	8	1155
National transport links	23	34	67	85	89	10	1077
Government regulation	29	41	66	68	80	22	981
International transport links	39	48	79	55	65	20	917
Local infrastructure (including buildings)	26	63	92	69	39	14	899
Environmental quality and pollution	43	72	99	48	20	26	776
The UK's current position outside the Euro zone	82	76	57	29	26	37	651
Availability of staff with language skills	73	68	69	41	12	44	640
Access to venture capital	101	52	50	15	8	80	455
Other (please specify):	0	0	1	2	13	3	

4. What is the nature of competition in your line of business in London? (Please rank in order of importance where 1 indicates most important, 0 indicates of no importance.)

	1	2	3	4	5	0	Tot
Competition on cost/price	44	57	59	59	55	31	798
Competition based on service differentiation	52	43	46	72	63	28	777
Competition based on innovation	38	53	68	61	41	43	769
Competition based on ability to serve customers across borders	41	57	52	57	53	46	756
Competition based on product differentiation	36	55	70	49	35	60	743

About Innovation

5. How much does your location contribute to your ability to innovate in each of the following ways?
Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
Developing new markets	40	44	69	81	42	20	869
Developing better ways of delivering your service/product	46	51	90	59	30	29	804
Developing new services	52	57	70	68	21	36	753
Re-orienting your company strategically in the face of change	57	59	77	46	24	37	710
Improving internal organizational structure	64	72	74	40	14	49	660
Developing new products	57	55	58	53	18	64	643

6. How important are the following types of local firms/institutions in helping your firm achieve innovative solutions? (Please tick one response per firm/institution type.) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
A pool of talented labor with relevant skills	19	31	42	79	111	22	1078
Customers	21	38	60	69	102	16	1063
Firms who help you supply your service/product	28	44	80	71	58	26	930
Other firms in the same line of activity	38	64	96	67	18	20	812
Industry associations	65	72	77	44	18	29	706
Academic institutions	98	85	55	24	10	33	579
Local government	139	63	28	16	7	51	448

About Links with Local Firms and Institutions

7. What proportion of your work comes through contacts with other firms in London?

86	0-20%	61	21-40%	66	41-60%	60	61-80%	27	81-100%
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8. Which types of firms do you have the most important inter-relationships with? (Please rank up to a maximum of 3 with 1 indicating most important.)

56	Banking	52	Insurance	5	Maritime services	3	Management consultancy
4	Accounting	39	Legal services	2	Advertising	19	Fund/Asset Management
2	Recruitment	1	Publishing	1	Market research	3	Property management
1	Printing	27	Investment banking	5	Other IT related	2	Provision of electronic information
3	Telecoms		Other (please specify):				

9. How important are each of the following reasons for having a location in close proximity to other firms in London? (Please tick one box per reason.) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
It is easier to build and maintain personal contacts	12	15	46	123	101	7	1177
The ability to have face-to-face contact	14	15	37	108	117	12	1172
It is easier to build relationships of trust and cooperation	17	33	71	98	73	13	1053
It is easier to communicate because we have a common understanding of the business	27	33	67	108	51	17	981
We generally have complementary expertise with such firms	24	47	101	80	34	19	911
Multi-disciplinary teams can be assembled more quickly	30	46	73	86	41	27	890

10. To what extent has your firm benefited from the following types of interaction with personnel in other companies? (*Please tick one box per factor.*) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
Contact by telephone for information e.g. about a legal matter, a technical question, the name of a trade contact	16	24	74	116	67	7	1085
Contact by telephone/e-mail for short-term problem solving	19	26	76	104	73	7	1080
Mixing with industry colleagues in social settings	22	36	78	95	66	9	1038
Mixing at local business meetings/events	17	38	74	103	62	11	1037
Chance meetings where you hear interesting information	28	52	76	89	56	5	996

11. Where does informal interaction take place? (*Please rank up to three with 1 indicating the most important.*)

102	Within the firm	107	Wine bars/pubs	77	Professional bodies	98	Restaurants	79	By e-mail
11	Sports clubs/events	7	Other clubs	150	Seminars/conferences	18	In the street	114	By telephone

Characteristics of the London Labor Market

12. Approximately what proportion of your staff do you recruit from within each of the following areas?

(Please tick one box per area.)

	0-20%	21-40%	41-60%	61-80%	81-100%
South East	27	26	46	59	152
UK (outside South East)	109	25	15	9	3
European Union (outside UK)	132	17	6	2	2
North America	130	2	4	0	1
Global (outside Europe)	132	2	3	2	3
Global (but for specific nationals to serve specific national markets)	117	4	1	1	2

13. How important are informal channels (e.g. personal relationships, local information through club membership, professional bodies, informal use of head-hunters etc.) for the recruitment of your skilled staff? (*Please tick one box per staff category.*) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
Senior management	29	31	43	82	73	42	913
Client-facing staff	30	41	72	63	53	41	845
Specialist staff (e.g. IT staff)	31	52	75	58	32	50	752
Senior technical staff (e.g. in-house lawyers, economists)	32	32	70	66	33	62	735
Back office staff	49	77	72	27	31	44	682
Graduate trainees	73	58	38	30	33	68	588

14. To what extent does labor flexibility within London lead to the following results? (Please tick one box per benefit.) Rate in terms of importance on a scale from 1 to 5, where 1=not important and 5=very important; 0=not applicable.

	1	2	3	4	5	0	Tot
A fluid labor market helps attract good staff	15	31	90	96	50	22	981
It is generally easy to recruit good people at short notice	15	36	94	98	41	21	966
It helps spread a network of contacts	19	35	88	94	47	22	964
It helps to spread knowledge of good practice	18	33	107	92	34	21	943
We can quickly tailor our staffing levels to our needs	17	50	103	77	32	26	894

Table A2 shows the composition of the sample obtained, giving details for the 294 cases where it was possible to classify the case to a specific line of activity (a small number of questionnaires were returned anonymously and could not be assigned to a particular line of activity). What can be seen is that the 294 returns are distributed across the lines of activity in very much the same proportions as the 1,500 firms to whom the questionnaire was issued (the table shows slightly less than 1,500 firms because it was not possible in every case to identify the line of activity to which the firm should be classified). We are therefore confident that we have a random and representative sample from the population of interest.

Table A2: Characteristics of the Questionnaire Sample

SIC	Description	Freq	Out of	Response rate %	Data set composition %	Whole sample composition %
65121	Banks	37	160	23.1	12.6	11.0
65122	Building societies (Thrifts)	0	5			0.3
6521	Financial leasing	0	2			0.1
65221	Credit granting	23	106	21.7	7.8	7.3
65222	Factoring	1	2	50.0	0.3	0.1
65223	Mortgage finance	0	1			0.1
65229	Other credit granting NEC	1	2	50.0	0.3	0.1
65231	Investment trusts	10	55	18.2	3.4	3.8
65232	Unit & property unit trusts	6	13	46.2	2.0	0.9
65233	Security dealing	11	62	17.7	3.7	4.2
65235	Venture & development capital	1	4	25.0	0.3	0.3
6601	Life insurance	39	149	26.2	13.3	10.2
6602	Pension funding	3	6	50.0	1.0	0.4
6603	Non-life insurance	1	6	16.7	0.3	0.4
6711	Administration of financial markets	4	20	20.0	1.4	1.4
67121	Fund management	1	3	33.3	0.3	0.2
67122	Security broking & related	0	4			0.3
6713	Activities auxiliary to financial intermediation NEC	5	22	22.7	1.7	1.5
6720	Activities auxiliary to insurance & pension funding	28	143	19.6	9.5	9.8
7011	Development & selling of real estate	4	21	19.0	1.4	1.4
70201	Letting of conference and exhibition centers	4	30	13.3	1.4	2.1
70209	Other letting of own property	3	21	14.3	1.0	1.4
74119	Legal services	59	355	16.6	20.1	24.3
74121	Accounting/auditing	11	71	15.5	3.7	4.9
74123	Tax consultancy	9	59	15.3	3.1	4.0
7413	Market research	7	29	24.1	2.4	2.0
7414	Business consultancy	0	3			0.2
74142	Financial management	2	4	50.0	0.7	0.3
74143	General management consultancy	5	24	20.8	1.7	1.6
74149	Other management consultancy	19	79	24.1	6.5	5.4
	Total	294	1461	20.12	100	100.0

The extent to which firms in different lines of activity rated the various factors in the questionnaire differently was tested using a contingency table method. The method compares the actual number of cases appearing in each cell with the expected count. The χ^2 statistic tests whether the differences between observed and expected counts in each cell are significantly different to what one would expect. The precise formula is given by:

$$\chi^2 = \frac{\sum (f_o - f_e)^2}{f_e}$$

Where f_o if the actual count in each cell and f_e is the expected count. χ^2 is distributed with degrees of freedom given by $(r-1)(k-1)$, where r is the number of rows in the table, and k is the number of columns. Where the calculated value of χ^2 exceeds some critical value, then we conclude that the differences between observed and expected values in the table are unlikely to have occurred by chance (less than 5 times in 100 for the particular critical value used in this study). Because the numerator in the χ^2 formula is squared, the larger the difference between observed and expected, the bigger the influence on whether the calculated χ^2 will exceed its critical value and lead us to the conclusion that we reject the working hypothesis that line of activity and a factor is unconnected.

A rule of thumb with contingency tables is that no more than 20% of all cells should have an expected count less than 5. In order to achieve this, categories are sometimes aggregated. The χ^2 statistic is somewhat fragile as it is influenced by the number of cases in the contingency table and is less likely to detect a true relationship between the variables in the table when the number of cases is small (which is sometimes the case for the current questionnaire survey). For that reason additional tests of the degree of association between the variables were used which are not sensitive to the number of cases in the analysis. Cramer's V is used where one or more of the variables is categorical rather than representing a ranking.

The second major means of analysis was to compare outcomes using tests based on comparison of the median. Here the responses to each question were compared by size of employment. The basis of the test is to rank all cases by size from smallest (given a rank of 1) to the largest. The sum of the ranks is calculated for each category of response and divided by the number of cases to compute the mean rank. Where there is no difference between the categories in terms of size, the mean ranks will be the same. The appropriate test statistic, the Kruskal-Wallis, was computed and again where the calculated statistic exceeds some critical value we reject the working hypothesis that firms giving each category of response had the same median size.

Appendix 3: Interview Schedule

- 1a) Why did your firm originally choose this London office location? 1b) What are the current advantages of this location for your line of business / which of these advantages are specifically associated with proximity to the City's critical mass?
- 2a) What is the nature of your relationships with other firms and institutions in the City (City Fringe) / what are the benefits of these relationships for innovation and competitiveness in your business? 2b) How do you communicate with nearby firms/ how important is close proximity and face-to-face contact?
- 3a) What is the nature of your business relationships elsewhere in London, the South-East, UK, Europe and globally / is there a functional or geographical 'City Fringe'? 3b) How do you communicate with people and firms located at a distance / how important is travel and face-to-face contact?
- 4a) What is the nature of your labor market – within London, the South-East, the UK, globally? 4b) In what ways, if any, are living and travel to work patterns changing in your business / what are the implications for the cluster?
- 5a) Has your firm recently considered moving to a different location, if so where? 5b) What factors are likely to enhance or threaten business concentration in the City / what action is required and by whom?
- 6a) Finally, what do you see as the benefits of business concentration in the cluster for London, the South-East, UK, Europe and other parts of the world? 6b) What could be done to enhance these benefits?

Positions of Personnel Interviewed

Company specific titles of individual interviewees are withheld for confidentiality. More than one individual was interviewed within some organizations.

Chairman	Group Reporting Partner
Chief Executive	Managing Director
Chief Administration Officer	Managing Partner
Chief Financial Officer	President
Chief Operating Officer	Senior Partner
Executive Director	Vice Chairman
Director	Vice President