Is there a Diamond in the City? - Leveraging the competitive advantage of the London Financial Centre

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Abstract

This paper applies the Diamond to a major services cluster and finds that it is an effective framework to tease out the characteristics that result in many tangible and intangible benefits of the location. The revelatory case will reveal how financial clustering influences the development of the City as a pre-eminent financial centre, how the Diamond conditions are defined in a service cluster, and whether there could be a generalisation of the concept. The paper concludes with the strategic and managerial implications to suggest the three golden rules of a location that will help firms optimise on these benefits. **(99 words)**

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Introduction

In 1990, Michael Porter posed a fundamental and challenging question – why do some nations succeed whilst others fail in international competition? Whilst some (Budd and Hirmis, 2004; Davies and Ellis, 2000) find his arguments contentious, his work remains an important and compelling part of the academic landscape concerned with competitive advantage as it addresses 'how the operation of particular clusters promotes growth and competitiveness' (Cumbers and MacKinnon, 2004: 961) of a region or nation. This revelatory case reveals how clustering influences the development of the City of London as a pre-eminent financial centre through the lens of Porter's (1990) work. It contributes by demonstrating how the Porterian conditions are defined in a service cluster, and whether there could be a theoretical and analytical generalisation of the concept to clusters in the services sector. Finally, the paper concludes with some strategic and managerial implications that will help services firms optimise the benefits from clustering.

Whilst many other studies focussed on manufacturing and high-tech clusters (Saxenian, 1994; Porter, 1990; Piore and Sable, 1984), the importance of financial clusters is often ignored. This industry is sometimes perceived as a trade-intermediation activity rather than a national industry [i]. The literature on major financial centres suggests that there are ten ‘alpha’ cities with leading financial centres. These include London, New York, Tokyo, Hong Kong and Singapore. Commentators on world cities (Friedman, 1986; Beaverstock, Smith and Taylor, 1999) typically associate major cities with a significant agglomeration of producer services (such as accountancy, financial or legal services), but none of them considers such agglomeration as clusters that could lead to the competitive advantage of nations. A case study of the London Financial Centre (the “LFC”) would thus provide a role model for competitive advantage for other services clusters.

The LFC forms an ‘exemplary’ case (Yin, 2003: 13; Stake, 2000), as the phenomenon is noticeable by many (Gordon and McCann, 2000; Taylor, Beaverstock, Cook, Pandit, Pain and Greenwood, 2003). The case, seen through the lens of the Diamond, is ‘revelatory’ (Yin, 1994; 41), as there seems to be an absence of research using this framework on an important service cluster. Methodologically, Swann (2006: 153) places a case study as an examination of a unit of analysis using multiple sources of data to present a mutually consistent evidence of the unit or to preserve anomalous views[ii].

Theory states that competitive advantage arises from a value creating proposition of a firm or a nation, possibly by managing its strategy for competition (Porter, 1980) or by managing its value creating activities (Porter, 1985). Barney (1991) contends that competitive advantage can be derived from rare, unique and heterogeneous resources that firms can translate into capabilities that are valued by the firm and customer. Porter (1990), however, reasons that a nation’s most globally competitive industries are likely to be geographically clustered within the nation and it is the quality of the environment– its factor conditions, its demand conditions, the presence of related and supporting industries, and the firms' structure and rivalry– that help incumbents achieve a high and rising level of productivity in a particular field. They form the determinants of clustering often referred to as the Diamond. Porter (1998a) introduces two external drivers, the roles of government and chance, which may influence clustering but themselves are not determinants; this paper focuses on the four main determinants (See Figure 1) on the services cluster.

INSERT FIGURE 1 ABOUT HERE

The following sections illustrate how the quality of the environment plays an important role in assisting incumbents in the LFC to attain a superior advantage in terms of resources and value creation.

Endowment and Creation of Factor Conditions

The strategic location of London some forty miles from the Thames estuary was an endowed factor condition for trade and financial intermediation during the late 17th century, where the earliest English banks were money scriveners and goldsmiths who provided monarchs and merchants with funds for their trade ventures. The financial activities are concentrated in a square mile, which during these early years was the full extent of the City of London (the "City"). Other historical events that shaped the LFC were the legislation on monetary control in 1826, the growth of regional banking in the 19th century (Collins, 1988), and the specialisation of industries and the beginning of international banking activities in the early 20th century (Jones, 1982). A recent critical event, the *Big Bang* of 1986, removed barriers to competition and helped the City exploit the full potential of its historic specialisation in banking and financial markets.

Today's important factor conditions, however, are created by sophisticated industries in advanced economies (Porter, 1998a). Specialised and advanced factors are needed to compete in a particular industry, and can result in sustainable competitive advantage for the firm if the provision is strong, inimitable, and not easy replicated at a different location or by a different firm. One unique provision in the LFC is the labour pooling effects. About one in three London's working population work for financial and business services (ONS, 2001), with about 500,000 commuters travelling to work in London on a daily or weekly basis (GLA, 2005).

INSERT FIGURE 2 ABOUT HERE

Figure 2 shows that the LFC employs about 1.12 million workers in 2001, of which about 41.90% work in banks, building societies and bank representative offices. The large agglomeration of banks and financial industries in London results in the pooling of specialised labour, which is a resource for incumbents. The labour pool which London can draw is of her greatest assets according to the banks as they reveal that the pulling power of London's fluid labour market "*is one of the most important engines of cluster dynamism*" (Taylor *et al*., 2004).

London's reputation in financial services attracts the most talented and skilled workers (Clark, 2002), creating a path-dependency effect. Higher labour mobility in the LFC results in knowledge diffusion in the cluster (Taylor *et al*., 2003). By relocating to, or having a presence, in the cluster allows incumbents to have access the knowledge accumulated and to benefit from the transmission of architectural and component knowledge in a cluster (Tallman, Jenkins, Henry, and Pinch., 2004) – a condition that may be rarer and non-transferable elsewhere.

The Greater London Authority (the "GLA") reports that labour productivity in the banking, insurance and other financial services is approximately 40% higher than the rest of the UK (GLA, 2005: 9). The UK Government suggests that the higher productivity in London is aided by the 'physical closeness and density of firms' (Strategy Unit, 2003: 11). Higher productivity is the competitive advantage that a clustered location offers to incumbents (Porter, 1998c). Increased productivity may be a positive impact of competition that is not transferred to other geographical spaces. Taylor *et al*. (2003: 34) point out that "*the advantages of the cluster…mean that it is unusually productive and so more resources flow into it which further re-enforce its advantages*". It is possible to suggest that being part of a large services cluster allows workers to productively access information, technology and institutions, and co-ordinate with other firms both horizontally and vertically. Gordon and McCann (2000: 523) find that one eighth of respondents in the LFC perceived "*increased opportunities for interaction or co-operation*", while Taylor *et al.* (2003:38) find the process of face-to-face contact being very important.

One banker in the City stressed, "*as a financial centre, London is an open society that is accepting to overseas people and to business*" (Taylor *et al*., 2003: 32). The profile of London's labour force is different from the rest of the UK, there is: a higher skill profile (London Development Partnership, 1999: 2); a younger age profile and higher ethnicity mix (Gordon, Travers and Whitehead, 2003: 6); and higher productivity especially in the service sector (GLA, 2005). Another respondent sums up, "*London* *as having the greatest ethnic diversity of any of the locations in which they operated, at least as far as the relevant labour market is concerned*" (Taylor *et al*., 2003: 34).

The LFC is seen as having one of the 'best' regulatory environments amongst other financial centres in New York, Paris and Frankfurt (Lascelles, 2003: 15), with a fairly liberal but fragmented regulatory regime (London Development Partnership, 1999: 28). The regulator is thought to be 'competent' with a 'lightness of touch' in a survey of 350 institutions (London Development Partnership, 1999). Such conditions may have attracted foreign firms to locate in London. Taylor *et al*. (2003) report that many London banks evaluate proximity to professional institutions and the legal and regulatory institutions (the Bank of England and the Financial Services Authority) as important advantages of their location.

A strong and stable exchange rate favours investment and trade in financial products. Signals from the Bank of England are watched by many in the financial sector. Its presence in the cluster allows efficient financial transactions to take place due to Britain's unique monetary system of discount houses working with the central bank. The presence of the Financial Services Authority and other professional bodies, which are funded by membership, is found to enhance the network effect, where financial services workers find it easier to enjoy information externalities through increased opportunities for interaction and co-operation (Gordon and McCann, 2000). Self-regulation and dialogue take place amongst incumbents. Thus, it can be suggested that one needs to be in the cluster in order to benefit. It is evident that the social network model is present (Gordon and McCann, 2000) due to the presence of a number of 'institutions for collaboration' (Porter, 1998a). Such institutions promote the formation of networks and create further opportunities for collaboration. The level of embeddedness is intensified due to such social relationships. Indeed, such institutions in the cluster may be essential determinants to promote cohesion resulting in the creation of a cluster ‘culture’ that is inimitable.

Information and communication infrastructure is recognised as an important advanced factor condition for an international financial centre (Reed, 1981). There is evidence of strong IT and media clusters nearby, which not only support the financial cluster, but themselves are globally competitive exporters and may in turn promote the financial cluster creating a path dependency effect[iii]. The quality of the transportation infrastructure is important if London is to rely on commuters to work in the cluster, to manage the residential population density, and to further attract foreign firms to locate in London. However, efficient transport is reported to be London’s Achilles Heel (Lascelles, 2003).

The Need for Related and Supporting Industries

Figure 3 shows that the LFC is chiefly clustered in the City. Canary Wharf is seen as an extension to the City’s cluster (Taylor *et al.*, 2003). The expansion of the financial cluster from the City makes less the impact of rental increases and allows for the cluster to expand (Clark, 2002). Other supporting clusters to financial services, such as the legal and accountancy clusters, are also located in the City.

INSERT FIGURE 3 ABOUT HERE

The existence of competitive supporting clusters may have an influence in London’s productivity if they are globally competitive, as these can add value to the incumbents’ value chain. Higher productivity eventually draws more resources to

London, such as capital investments, as firms are more profitable and can afford to invest more. Porter (1990) finds that internationally successful upstream and downstream industries often co-exist at the same location, as the competitive supporting industries create advantages to downstream activities by delivering cost effective inputs and providing innovative and upgraded alternatives. More importantly, Porter (1998a: 176) emphasises, "*Suppliers and end-users located near each other can take advantage of short lines of communication, quick and constant flow of information, and an ongoing exchange of ideas and innovation*". This advantage in proximity is something distant suppliers cannot match.

Reed (1980) supports the importance of having competing and complementary institutions in an international financial centre. Many financial institutions place a major emphasis on the importance of proximity because London offers close physical contact with primary financial markets (McKillop and Hutchinson, 1990). World class related industries can provide sources of technology, ideas, and potential competitors to the location, all of which can be advantageous to international competition (Yetton *et al*., 1992). The Government contends that similar and related firms in London allow firms to benefit from a larger labour pool, interaction with each other, intelligence sharing and better customer attraction (Strategy Unit, 2003: 11). The LFC contains a good mix of related financial services industries with an industry concentration index of 0.308 (Figure 2). Insurance, trust and pension fund firms are reported to form 60% of institutional investors in the securities industry (McKenzie and Maslakovic, 2003: 7). Such institutions are important buyers in the LFC and the presence of financial markets enhances the feasibility of locating in London. Commercial banks' clienteles are largely international, although 65% of lending is domestic with a quarter of this to local financial institutions (Maslakovic, 2004: 8). These activities support the need for most related financial industries to cluster together within the City.

Quantum and Sophistication of Demand

Britain's deficit in the balance of payments from manufacturing has increased from £12 bn in 1995 to £47 bn in 2003, while financial and business service industries provided a positive balance of payments of £11.5 bn in 1995 and £30.7 bn in 2003 (IFSL, 2004:7). The UK financial service generated US$22.8bn of trade balance in 2002, much higher than Germany, Switzerland, the US and France. Of the financial services, the largest trade balance comes from banking & other financial services of US$13.4bn and insurance of US$9.4bn in 2002 (IFSL, 2004: 7). This suggests a constant demand for, and supply of, the country's currency – a pre-requisite of an international financial centre (Reed, 1981).

With the third largest banking industry deposits in the world (US$3.0 trillion in 2002), Britain's banking deposits are exceeded by the US (US$4.5 trillion) and Japan (US$4.4 trillion) both of whom have a larger domestic population (Maslakovic, 2004: 23). In 2003, the UK banking industry deposits totalled £3,748 billion, of which 40% came from overseas deposits, suggesting the very international character of British commercial banks. The strong international orientation of the banking industry is also reflected by the fact that over 40% of the total assets of the UK bank industry were held in foreign currencies in 2003 (Maslakovic, 2004).

The LFC may be supported by strong domestic demand initially; Taylor *et al.* (2003: 26) contend that the London location is perceived to be reputable as this is a '*reliable* *signal conveying valuable information in the market*', especially for external customers and foreign rivals to place their monies in London. The size of home demand, whilst important, proves less significant than the rising demand and the character of demand (Porter; 1998a:174). The International Financial Service London (the "IFSL") estimates that net exports for financial services have increased by 65% from 1998 to 2003, of which insurance experienced the fastest growth rate of 125%, fund managers at 78%, securities dealers at 38% and banks at 17%. The increasing amount exported represents rising demand in these industries.

Porter (1990) argues that global success of an industry is more likely if the home segment is already sophisticated and demanding. The sophistication of demand leads to fierce competition among domestic producers, and the need to produce the best products. Innovation in financial services is one of London's success factors according to Drucker (1999). The invention of the credit card in the 1960s enabled commercial banks to survive despite much of the commercial loans business being siphoned off by newer financial institutions. The City has been innovative in the global derivatives industry over the last thirty years, but Drucker (1999) contends that commercial banks may need to continue innovating in order to succeed.

Strategy, Structure and Rivalry Within

The Department of Trade and Industry (the "DTI") reports significant agglomeration of bank holding companies and banks in London that accounts for 66% and 34% of the UK banking industry employment respectively (DTI, 2001). The LFC is home to four of the largest 15 global banks in the world, with HSBC Holdings ranked 3rd and Royal Bank of Scotland ranked 7th in terms of tier-one capital (See Figure 4). Nachum

(1999) earlier suggests that national firms enjoy favourable access to the assets of their home country and use these to develop competitive advantages that deny their foreign counterparts from investing. The presence of one or a few strong domestic players is certainly important to a cluster as they help to attract and establish the supporting industries, create a form of competitive rivalry, and set the pace of competition for foreign entrants.

INSERT FIGURE 4 ABOUT HERE

Taylor *et al.* (2003) find significant economies of agglomeration in the LFC and highlight that it resembles a Hub-and-Spoke type of cluster (Markusen, 1996) with the large clearing banks and investment banks acting as central hubs. Notwithstanding the larger players, the London cluster also consists of many medium-size 'boutique' banks and financial institutions acting as spokes. Drucker (1999) emphasises the importance of the LFC to medium-size financial institutions as these institutions require the critical mass to supplement or support their competencies in terms of products, technology, marketing and customer services.

Big Bang removed the barriers of foreign ownership in local institutions, resulting in foreign takeover of local banks (for example Abbey National) and a number of former building societies (such as Halifax Group) becoming commercial banks. The *Big Bang* is one of four factors that enhances London's international standing and attractiveness to foreign entrants (Nachum, 2003: 1189). Figure 5 shows the total number of authorised banks continues to increase (Maslakovic, 2004: 3), with London remaining a popular centre for foreign banks. There are 287 foreign banks located there in March 2003[iv], demonstrating London's attractiveness and open policy to foreign participation. Foreign financial institutions locating to the UK will almost entirely prefer to settle in London because of the "*mutual benefits arising from the concentration of financial firms in one location*" (Molyneux, 1992: 668).

INSERT FIGURE 5 ABOUT HERE

As such, the competitive rivalry continues to increase. Performance and profitability may be stifled due to more competitors, some of whom bring with them a wealth of foreign experiences and new modes of competition. On the contrary, Gordon and McCann (2000) report that a strong 37% of financial services respondents in the City and Inner London agree on having the benefit of shared intelligence by being in the cluster. One interesting finding is that financial services firms would be more likely to see the advantage of shared intelligence if their main market was abroad. This is an alternative reason why foreign banks continue to choose to locate in London. Other evidence also suggests that foreign banks are not stifled in the cluster, but enjoy better performance than domestic institutions (Nachum, 2003). Competition may spur firms to innovate more to meet the demands of competition. Taylor *et al.* (2003: 32) also find that 'local rivalry' is viewed as important and beneficial by the London's commercial banks who are more likely to enjoy being near leading competitors.

Although the size of institution is important in attaining traditional economies (Clark, 2002, Taylor *et al.*, 2003), by locating in London, smaller institutions may still attain certain economies of scale and scope– enhanced through inter-firm collaboration - when mergers are not in question. In a separate survey, more than 10% of respondents perceive advantages from co-operation, sub-contracting and potential contacts, which indicate a strong level of embeddedness in the financial cluster in spite of intense competition (Gordon and McCann, 2000: 523). By working with competing and related industries in the cluster, new opportunities may surface, resulting in a new demand or provision – as in the case of the financial derivatives industry – or a new strategic direction for the firm. In such cases, talent pool for growth or expansion can be easily obtained in the cluster.

Generalisation of the Porterian Concept

This case study effectively points to important determinants for successful financial clustering that matches with those benefits and needs that global industry players seek, it also suggests that the Diamond can be used to analyse the services sector. The existence of domestic factor conditions, such as a liberal and stable regulatory framework, strong IT and communication infrastructure, or financial stability are essential for firms' pursuit of competitive advantage against international rivals. Some domestic factor conditions - the labour pooling effects and superior reputation - have a path dependency effect in attracting further talent pool and increasing its reputation.

The presence of related industries, such as securities, insurance and fund management firms, is significant as they can be important buyers and sellers. Related industries that operate domestically, such as money brokers and discount houses, contribute to the effective financial system. The presence of competitive supporting clusters, such as the IT cluster, also draws foreign financial institutions to London. Local suppliers, in this instance, play a crucial role in creating competitive advantage for the financial cluster, where closeness and proximity creates an integrated network within the City, and there is less need for firms to vertically integrate to gain competitive advantage.

The deviation from Porter's (1990) original argument is that strong home-based demand conditions seem less important, as the nature of the London cluster suggests an inimitable international orientation. There are many strong British and international banks anchoring the cluster. It is the competition from foreign rivals and the overall critical mass achieved in the banking industry that are determinants to competition and successful financial clustering in London. In line with Porter's suggestion, the interactions between determinants have also been found to result in the further creation of superior conditions, such as the derivative software supporting industry and the heightened productivity of the cluster.

Understanding the Diamond conditions could allow policy makers and regional planners to plan for the necessary conditions needed to gain international competitiveness. It would also remind industry players and managers what they really seek as a business location. Three key characteristics of the City's Diamond stand out:

- The Centre is home to the nation's central bank and financial regulatory body, coupled with a high agglomeration of bank-holding companies and banks. It is also the political seat of the Government. These attributes allow players to exert global financial articulation. The Government's attitude of free-conduct, open-dialogue and self-governance is characteristic of the political climate, resulting in a fairly liberal regulatory regime that does not alienate foreign participation. The Joint-Stock Bank Act of 1886, and latterly the *Big Bang* of 1986, further supported London's pre-eminence as an international financial centre.

- Locating in the Centre has economic benefits for financial institutions. The nation's strong and stable exchange rate favours investment and trade in financial products. The Centre has an international orientation, with an international demand for, and supply of, its currency. The existence of competitive supporting industries in the City can add value to firms' value chain, while competitive related industries are important buyers and sellers. These institutions, in proximity, generate higher productivities, economies of scale and scope in the cluster.

- The social characteristics are most important in creating sustainable competitive advantage for incumbents as they are inimitable, valuable and non-transferable. There is an active critical mass of people working in the Centre. Being in a densely populated working environment increases the opportunities to interact and coordinate with other workers and institutions, both formally and informally. Face-to-face contact is very important for knowledge spillovers and networks in this sector. The Centre is an open society that is accepting of foreign workers and institutions. The culture is very competitive – to succeed one has to be productive and result-oriented. High labour mobility is acceptable in the Centre and is seen to be an enabler to knowledge spillovers.

Conclusion

London, having developed a financial cluster over the last three centuries, serves as a role model for other financial centres. The key question for government policy makers and managers is whether they could devise suitable plans to promote or tap onto these benefits that global players seek.

Strategically, clustering implies that corporate headquarters located in a cluster with the presence of political power (such as leading national government and the central governing agency) will aid them to attain global articulation. Being in a cluster that is already successful will intensify the opportunity for incumbents to influence other key players and governing institutions. The managerial implication is to develop the ability to network with these key institutions. Secondly, locating in a successful cluster can provide strategic economic benefits such as better access to the international markets. The managerial goal must be to connect into the economic activities of the cluster and to increase firm-to-firm communication in creating greater value for the firm's activities. Inter-firm collaboration can intensify external economies of scale and scope within a cluster. It also creates a stronger level of embeddedness to counteract any external competition. Thirdly, the strategic social context of clustering means that incumbents can have access to a highly specialised workforce, who may also be more productive. The managerial implication for firms is to further create, or participate in, networking opportunities and to form collaborative institutions to promote the industry's objectives to attain her international competitiveness.

The three golden rules are more generic in helping industries leverage on the competitive advantage through clustering. It may also serve as a guide for policy makers in their regional planning. This paper has shed some light through the lens of the Diamond on what is needed and the benefits that players seek, capturing ultimately what constitutes successful clustering for national competitive advantage.

(4195 words)

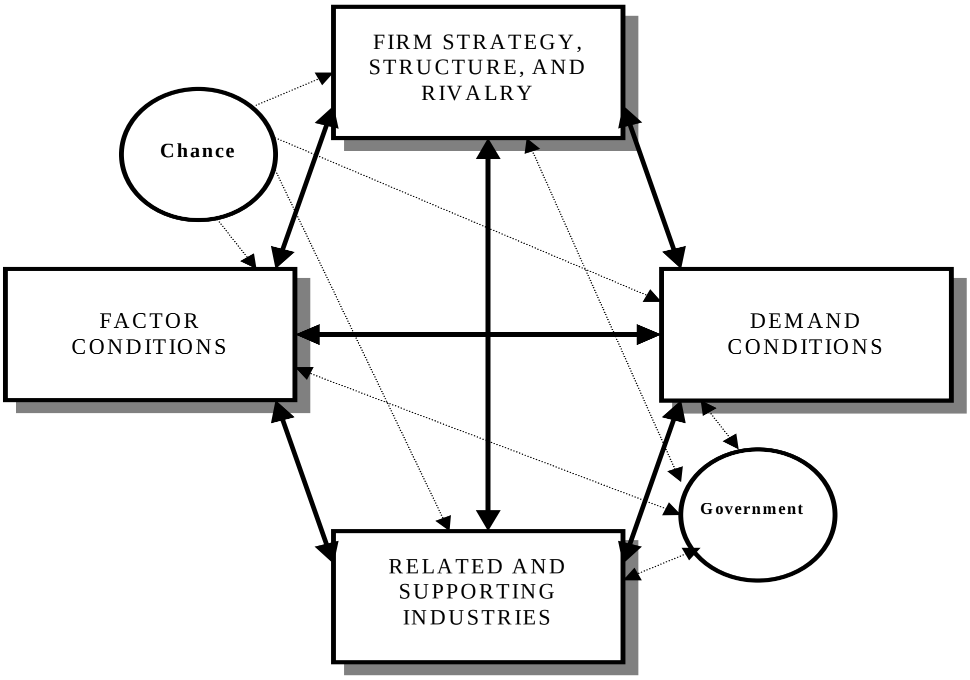

Figure 1 The Determinants of National Competitive Advantage

Source: Adapted from Porter, 1998a;b;c

	Specific Industry versus Overall Financial Industry Employment in London	Herfindahl Index
Bank and Building Society	41.90%	
Credit Granting and Fin Leasing	1.12%	
Trust and Pension Funds	33.15%	
Life Insurance	5.09%	
Non Life Insurance	13.89%	0.308
Financial Auxilliary	0.64%	
Insurance Auxilliary	2.41%	
Securities and Exchange	1.80%	

Figure 2 Breakdown of London's financial services employment in 2001

Source: Calculated from FAME

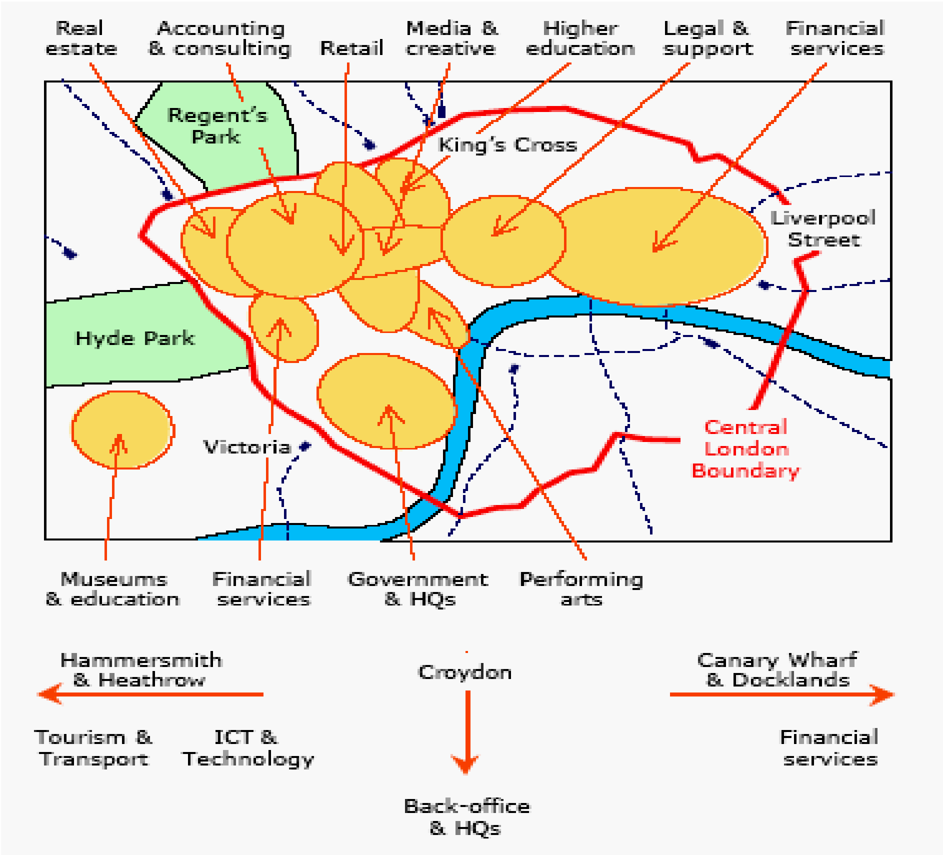

Figure 3 Inter-locking Clusters in Central London

Source: Strategy Unit, 2003: 11

$bn, end-2002 Top 15 banks in the world	Country Origins	Tier One Capital
Citigroup	US	59.0
Bank of America Corp	US	43.0
HSBC Holdings	**UK**	**38.9**
JP Morgan Chase & Co	US	37.6
Credit Agricole Groupe	France	35.7
Mizuho Financial Group	Japan	29.1
Royal Bank of Scotland	**UK**	**27.7**
Sumitomo Mitsui Financial Grp.	Japan	27.1
Mitsubishi Tokyo Financial Grp.	Japan	26.0
BNP Paribas	France	24.1
Bank One Corp	US	23.9
Deutsche Bank	Germany	23.8
HBOS	**UK**	**23.8**
Barclays Bank	**UK**	**22.9**
Bank of China	China	21.9
Other UK banks in the top 100		
Lloyd's TSB Group	**UK**	**15.3**
Abbey National	**UK**	**11.7**
Standard Chartered	**UK**	**10.4**

Figure 4 Largest banking holding companies in the world

Source: The Banker cited in Maslakovic, 2004: 25

	1995	1999	2002	2003
Incorporated in the UK	224	200	184	185
- UK owned	142	121	94	95
- Foreign owned [1]	82	79	90	90
Incorporated outside the UK	301	449	490	501
- EAIs with UK branches [2]	102	109	93	94
- Other EAIs*	44	205	284	304
- Outside the EEA [3]	155	135	113	103
Total authorised banks	525	610	674	686
Foreign banks physically located in the UK [1]+[2]+[3]	339	323	296	287

** Other European Authorised Institutions (EAIs) are entitled to accept deposits in the UK on a cross border basis*
Source: BOE, Financial Services Authority. Cited in Maslakovic, 2004: 3

Figure 5 Number of Banks in the UK

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[i] Based on informal discussions with Yorkshire Forward and the Singapore Economic Development Board; neither government agency considered financial services in their cluster planning and strategy.

[ii] This case study draws on multiple sources of information. Thomas (2004) points out that a case study can achieve particularisation: to understand the workings of a particular example in depth. Published sources of evidence are used in this case study as they are easily obtainable and reliable. We used Scott's (1990) criteria of authenticity, creditability, representativeness and meaning to assess such documentary evidence and archival records. The main findings draw mainly from two surveys conducted by Gordon and McCann (2000) and Beaverstock *et al*. (2003) that are based on 3400 business respondents in London, and 310 respondents from dominant financial services in London respectively. The Diamond framework is ideal as financial services clusters are open and tradeable like those clusters in Porter's (1990) work. The case achieves particularisation, Swann (2006) contends that a deep understanding of one example in economic studies is still valuable.

[iii] London-based firms in the IT cluster develop bespoke software products for big banks. The ability to produce sophisticated software to match innovative financial derivatives promotes an agglomeration of American and European financial derivative firms in London.

[iv] This figure is much higher than New York and Paris, with 224 and 179 foreign banks respectively (Maslakovic, 2004: 24)