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**Long run relationships between City office rents and the economy in
the UK – creating a database for research**

Steven Devaney

Department of Real Estate and Planning,
University of Reading Business School,
Whiteknights, Reading,
RG6 6AW, UK

Phone: +44 (0) 118 378 6215, Fax: +44 (0) 118 378 8172
E-mail: s.p.devaney@reading.ac.uk

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Abstract

This paper sets out progress during the first eighteen months of doctoral research into the City of London office market. The overall aim of the research is to explore relationships between office rents and the economy in the UK over the last 150 years. To do this, a database of lettings has been created from which a long run index of City office rents can be constructed. With this index, it should then be possible to analyse trends in rents and relationships with their long run determinants.

The focus of this paper is on the creation of the rent database. First, it considers the existing secondary sources of long run rental data for the UK. This highlights a lack of information for years prior to 1970 and the need for primary data collection if earlier periods are to be studied. The paper then discusses the selection of the City of London and of the time period chosen for research. After this, it describes how a dataset covering the period 1860-1960 has been assembled using the records of property companies active in the City office market.

It is hoped that, if successful, this research will contribute to existing knowledge on the long run characteristics of commercial real estate. In particular, it should add a price dimension (rents) to the existing long run information on stock/supply and investment. Hence, it should enable a more complete picture of the development and performance of commercial real estate through time to be gained.

Keywords: office rents, City of London, property market history

1. Introduction

The commercial property market is a significant part of the UK economy. It facilitates other activities through the provision of space and it is also an important home for investment funds. Much research has taken place on the relationships between this market and the rest of the economy. However, such research has predominantly been on the period since 1970, with researchers hampered in examining longer and earlier periods by a lack of long term data, even on fundamental aspects such as levels and changes in real estate rents and prices.

Some recent literature has begun to address this problem by constructing data series and providing more formal analyses of historic market structures. This includes studies of the long term investment returns to property (Scott, 1996; Key et al, 1999) and of the stock of commercial buildings and patterns in building activity (Ball, 1996; Ball and Wood, 1996; Barras, 1987, 2001). Yet the price of space remains a crucial missing aspect. This is something that this PhD seeks to address by researching rents over the long term, thus enabling more complete economic analyses of this market to take place.

A specific objective of this project is the collection of rent, building and lease data to enable the construction of a long run rental index. With this index, the project will explore trends in rents and identify the main determinants of rents through the period, with a particular interest in exploring links between rents and economic growth. The investigation is focused on the City of London office market and it seeks to research office rents over approximately the last 150 years. Significant progress in assembling a dataset to cover this period has already been made.

This paper concentrates on the creation of a rent database, reflecting the stage that the research has reached. In section 2, existing sources of long term data for commercial property are reviewed and this highlights the lack of long term rent series and the need for primary data collection. Section 3 then discusses the parameters placed on the data collection exercise with respect to location and time period. Following this, section 4 discusses the data assembled for this project so far, with the planned programme of research outlined in section 5.

2. Existing literature and sources

The history of the UK commercial property market has been explored from a variety of perspectives. These include works of economic geography, such as those by Cowan et al (1969) and Daniels (1975) that chart the rise of the office, studies of architecture and construction that shed light on the development of building types (Powell, 1980; Summerson, 1990) and, more directly, the formal historical study of Scott (1996). In addition, anecdotal literature and biographies also provide insights into past market environments and operation (Marriott, 1967; Erdman, 1982). This review concentrates on studies that provide data on property market performance, especially with respect to rents.

The main indicators for commercial property returns and rents in the UK are those produced by Investment Property Databank (IPD). Their national rent index (split into three sectors) begins at December 1975, but sub-market indices only begin from 1980. There are then several other series produced by commercial surveying firms; these tend to date from the mid-1960s at the earliest, as it was around this time that regular valuations for investors were becoming common. Reviews of the construction and quality of these series have been conducted by Crosby (1988a) for rental data and by Morrell (1991) with respect to returns.

Government has been an important source of commercial property information, but this has tended to be within the spheres of construction, planning and the property stock rather than on rents. The value of the property stock is estimated from figures collected by the Valuation Office Agency (VOA) in the course of valuing all UK non-domestic property for taxation purposes. Despite being made on a rental basis, these valuations cannot be utilised for a rent indicator since full, national re-valuations have historically been infrequent¹, and changes in the published aggregates result from both value movements and stock changes. In order to undertake these valuations, though, the VOA collect extensive data on market transactions and have, at times, published rent and yield series based on their assessment of the evidence they have gathered.

¹ Since the Second World War, revaluations have been conducted as at 1956, 1963, 1973, 1990, 1995, 2000 and 2005.

For instance, rental series for shops, offices and industrial premises were published for the period 1962-1979 in Department of the Environment (1980).

Of particular interest in this research are studies that have presented rental data for the City of London office market. The schedule on the following page shows sources that contain data which predate the IPD City office series. From this schedule, it can be seen that some authors have published London office rental data for as far back as the 1950s. However, the basis of such information is weak by modern standards. There are problems regarding coverage and aggregation, inconsistencies where series overlap and difficulties with splicing data where series do not overlap. The existing secondary sources must therefore be treated with caution and further evaluated as to the extent that reliance might be placed upon them.

In order to get data for years prior to the 1960s, researchers have had to undertake extensive archival research exercises. The most well known was that by Scott (1996). He derived income, capital and total return series for UK investment property from 1921, with sector level figures beginning from 1959. To do this, a variety of sources and approaches were used, although this has raised questions about the reliability and consistency of the series through time (Key et al, 1999)².

In addition, Scott (1996: 271-274) presented rental indices from 1962 onwards, but, unlike his return figures, these were based only on secondary sources, with the earliest years (to 1966) using data published by Michael Laurie & Partners and the Economist Intelligence Unit (ML-EIU, 1974). The credibility of this source has been questioned, with Key et al (1999: 55) suggesting that figures for these early years were collected retrospectively through interviews in the 1970s. Furthermore, both Key et al and Scott and Judge (2000) compare ML-EIU rents and capital values against other available series and these exercises suggest that the ML-EIU data are unreliable and that they overstate property market growth.

² In particular, there is a major break between the pre- and post- 1948 figures; returns for the former period were constructed synthetically using yields and yield changes, whilst returns for the latter period were based on the actual performance of one, and later two, insurance company portfolios.

Source	Dates covered	Area covered	Description	Problems	Further References
CBRE (formerly Investors Chronicle/Hillier Parker) Rent Index	1965, 1969, 1972-present	Series for City, West End, Midtown, Fringe London and Suburban London, plus Docklands from mid-1980s	Judgement of what "headline" open market rental value would be for a new or recently refurbished building at a series of locations. These are then aggregated to produce sub-market series. Also assumes unit of 10,000 sq ft let on rack rented terms.	'Hypothetical' basis. Missing years in 1960s.	Methods set out in CB Hillier Parker (2000).
Debenham, Tewson and Chinnocks	1970/1-1986/7?	City, Mayfair and several London boroughs, plus other UK locations	Average rent for prime space based on "market knowledge". For London offices, properties were analysed where units 10-20,000 sq ft in a 1970s air-conditioned office development in prime location. Also tables rates.	Observations are Spring dated	Available in DTC (various) and also Manners and Morris (1986) for years 1970/1 to 1980/1.
Economists Advisory Group	1960, 1965, 1967-1970, 1973-1974	Five points within the City: Banking area, Insurance area, Shipping & commodity markets, Smithfield and Fleet St. & Western	Averages from evidence provided by Jones Lang Wootton and assembled from press reports. 1974 rents relate only to first 6 months of year. Data also split along type/age lines, with figures for New, Modern, Modernised old and Old premises.	Difficult to aggregate. Missing years.	Levels to 1970 presented in Dunning and Morgan (1971). Levels for 1973-4 and some earlier figures in Economists Advisory Group (1974).
Manners and Morris	1962, 1964-1980	Series for the City and for the West End, where latter relates to Victoria	Described as prime rents. Data assembled from other sources (LOB, agents and, for 1970 onwards, DTC).	Combines series that may have different bases. Methods not noted.	Manners and Morris (1986: 45-46).
Rose	1956-1970	Not specified, though discussion implies that data for the City	"representative rents per square foot" from observation of transactions. Refer to blocks in "fair" positions.	Vague about area, sources and method of construction.	Data in Rose (1985). Data and description of series in Rose (1971).
Vallis	1950-1969	"Central London"	Derived from details of transactions published in the Estates Gazette and information supplied by Gross, Fine & Co.	Vague about area and method of construction.	Seeking access to original source (Vallis, 1971).
Valuation Office	1962-1979	Three London series, City, West End and 'Decentralised', plus 'Provincial' offices	Based on the opinions of District Valuers, using rent per square foot evidence from new lettings of centrally located modern office blocks.	Index numbers appear to be rounded.	Index in Department of the Environment (1980). Levels graphed in Department of the Environment (1976).

The longest and most detailed study of rents has been that by Crosby (1988b). He constructed a database of rental transactions for shops in the city of Nottingham using original records. Owing to the nature of shop leases, often very long for much of the study period, and the problem of changes to buildings through time, indices were built up by conducting rental valuations in each year from the available evidence rather than by tracking building growth rates through time. Both prime and average rental growth indices were constructed for the period 1910-1986, with the years after 1946 based on a much larger number of observations.

For the retail sector in the UK, an indication of long term rental trends does, therefore, exist, albeit for a single location. In the case of the office sector, there is no series that covers this same period. However, Turvey (1998) has constructed an office rent index for the earlier period of 1867-1910. He focused on the City of London office market, using rental transactions recorded in the board minutes of the City Offices Company. This company owned several office blocks in the City, which were subdivided into a large number of rooms and let to many different tenants.

To construct his index, Turvey specifically selected rooms where two or more lettings of that space had taken place. Taking those pairs of observations, he then used the basic repeat measures regression technique of Bailey et al (1963) to estimate annual rental changes. Comparison of the City Offices Company board minutes with other documents such as lease registers (where they overlap) indicates the former are an imperfect source of evidence³, but the achievement of Turvey in producing this series should not be underestimated. In the same article, he also estimated vacancy rates for 1876-1908 in the City Office Company portfolio.

In this research, a similar approach to that of Turvey is being taken in terms of data collection and index construction, but the project also aims to extend his work in several ways. First, background research into selection of the City office market and the time period to be studied has been undertaken and this is summarised in section 3. Second, this research uses the records of a larger number of property companies, details of which are given in section 4. Third, with these records, it is hoped that rental

³ Sometimes, the minutes appear to reflect negotiations rather than the final terms of lettings.

data can be provided that bridges the gap between the nineteenth century and the last 40 years. Finally, in building the index, different methods will be considered and recent methodological developments in transaction based real estate indices will be reflected.

3. Parameters for this study

During the early stages of the research, the feasibility of investigating different sectors and locations within the UK commercial real estate market was explored. This led to a number of decisions about the scope of the work being made. Some of these were driven by factors outside the control of the researcher; mainly with respect to what records had survived and whether it was possible to gain access to them. This is further discussed in section 4.

However, in order to make the study feasible and coherent, other decisions within the control of the researcher were taken about its scope. Having selected the office market as being of particular interest, these principally related to the spatial and temporal boundaries of the research. Section 3.1 discusses the decision to focus on the City of London. Section 3.2 then considers the time period chosen for research. Although divided in this way, these decisions have some influence on each other. For instance, the City has been selected, in part, because it has been established as office location for a long time. Then, once chosen, this affected the start point from when analysis of office rents could begin, since this depended on when both office activities and office buildings became widespread in that area.

3.1 Location

The City of London, defined as the area administered by the Corporation of London, has been selected for investigation for three reasons. The first of these is pragmatic. It relates to the success gained in finding evidence over a long period for this location and the amount of time then needed to collect and analyse the available material.

The second reason relates to the size of this office market both in absolute terms and relative to other office markets in the UK. Historical figures on size are sparse, but Dunning and Morgan (1971: 32) record that in 1939, there was 37.6 million square feet of office space in the City, growing to 47.9 million square feet by 1968, despite extensive destruction during the Second World War (Holden and Holford, 1951: 271-275). These figures show that the City has had a large office market for many years

and this should assist the assembly of a rent series, since index construction requires, amongst other things, a large body of evidence for methods to function effectively and the resulting figures to be meaningful. Such evidence is more likely to exist where a large market has been in place for a long time.

Meanwhile, in relative terms, the size of the City can be shown using rateable value data. This is tabled by Dunning and Morgan (1971: 51) for the years 1963/4 and 1968/9, alongside comparison data for Greater London and England & Wales as a whole. At the earlier date, the City accounted for 29% by value of all offices in England & Wales, whilst Greater London accounted for 78%. Figures for the later date are similar. Therefore, versus other locations, London in general and the City in particular seem obvious choices for examination⁴.

The third reason for choosing the City is its economic role and linkages to the national economy. For many years, it has been the UK's main financial centre, so both local and national factors are likely to affect its property market. This could be seen as a drawback if the location is too specialised. Yet, whilst finance has long been important, many other activities have historically taken place within its boundaries (Ball and Sunderland, 2001: 336, 359-361; Dunning and Morgan, 1971: 33-35). This is not only true because of the many warehousing and manufacturing premises present until post-war redevelopment, but it has also been true of the occupancy of offices (Devaney, 2006).

These issues of economic role and structure are not only important for the selection of the City, but they will also affect how the relationships between rents and the wider economy are analysed. Therefore, they are the subject of continuing investigation.

3.2 *Time period*

⁴ Work is in progress to assemble rateable value comparisons for other years. The dominance of the City is less today and this is due to factors such as the decentralisation movement of the 1960s and 70s and the development of business parks from the 1980s, but it is unlikely that it was less in earlier years.

Two decisions regarding time period were made. The first was to define a start point from when analysis of City office rents would begin. The second was to make an end point for the primary data collection exercise and this depended on the availability of secondary data series. The discussion in section 2 suggests an end point in the 1960s. This solves the problem of accessing of recent, commercially sensitive data, but it does raise the issue of potential inconsistencies between the basis and methods of the historical series and those of any other index used to extend analysis to the present day.

For the start point, it was decided to identify a desirable date in the knowledge that this may not be attained if archive data for that date is not available. Three factors were seen as important;

- the beginning and growth of office activities,
- the development of separate, specialist premises, and
- the evolution of renting into a professional business

Office activities have been present in the City for a long time, with the growth from the sixteenth century in trade, banking and insurance being particularly important (Harris, 2005). However, in these early years, such activities were carried out in the homes of merchants, at the Royal Exchange and at inns and coffee houses (Keene, 1997). Hence, such an early date is not helpful for studying office rents. The existence of distinct premises is needed, since properties were rented in these early years for both their commercial and residential features.

During the nineteenth century, and with the industrial revolution, the scale of trade and business activity increased. This, in turn, increased the need for formal administration and communication (Cowan et al, 1969: 26-30). Daniels (1975: 8-9) also highlights the growing size of organisations themselves in this period. Together, these factors drove the growth, specialisation and separation of office activities within businesses and in the wider economy. This process was facilitated by advances in communication (post, telegraph and telephone) and the invention of items of office machinery (Daniels, 1975: 10-13; Orbell, 1991).

In the City, such growth was initially met by adapting existing residential buildings, but, as Jefferson Smith (1997: 367) notes, this solution became inadequate for certain types of business, namely insurance companies and the new joint-stock banks. These firms sought to build premises that would accommodate their growing activities and, also, convey an image of security and success (Summerson, 1990: 195). Hence, from the 1820s, purpose built office blocks began to appear. However, for a study of office rents, it is not offices per se that are necessary, but the existence of a supply of rented office accommodation.

The earliest known speculative block of offices in the City was built as early as 1823 (L'Anson, 1864: 25) and, gradually, such developments became more common, with some sold to owner-occupiers and others rented out as investments (Baum et al, 1998: 6). The main constraints on speculative office building are likely to have been the amount of and risks to capital that were involved. These were mitigated by the passing of limited liability legislation in the 1850s⁵, following which a number of public property companies were formed. Alongside this, the development of professional bodies and an increase in market information were enabling a more formal market in office property to emerge (Scott, 1996: 19-21).

Thus, by the 1860s, several important things were occurring with respect to the office market, including a rapidly increasing number of office workers, a greater amount of office construction and the emergence of a letting market in office space. Hence, this decade has been selected as the start point for the study, with the data collection period encompassing 1860-1960. The next section now discusses some of the sources that have been used for rental information on these years.

⁵ Specifically, Acts of 1855 and 1856. Before this, joint-stock status had been available, but obtaining limited liability was difficult (Armstrong, 1991: 35-37).

4. Data collection and dataset description

Much time in the early stages of this project was spent in identifying and accessing suitable sources of rental data. Efforts were concentrated on tracing and accessing the records of property owners, as the most likely holders of sufficiently detailed and accurate transaction data, rather than those of agents, tenants or the contemporary property press. However, initial enquiries highlighted issues with this approach.

First, many of the larger traditional owners of property (e.g. urban landed estates) typically granted long building leases or head leases to a more fragmented class of intermediate investors who would then construct and/or manage properties on their land. The records of such traditional owners are, therefore, of limited use in this investigation. Second, enquiries with some property companies and financial institutions established that records of sufficient age no longer existed, especially in cases where mergers and takeovers had taken place. Third, some other organisations were unwilling to allow access to their records because of cost or confidentiality implications.

The results of these enquiries led to a search for publicly available records. The study by Turvey (1998) indicated that records for at least one property company, the City Offices Company, were held at the Guildhall Library in the City of London. Further investigations showed that the library kept records of ten former property companies in total and these are listed below in Table 1.

Table 1: Property companies with records at the Guildhall Library, London

<i>Company</i>	<i>Record span</i>	<i>Investigated?</i>	<i>Useful?</i>
Broad Street Estates Ltd	1913-1966	Yes	Yes
City and West End Properties Ltd	1897-1964	Yes	Yes
City Offices Co Ltd	1864-1979	Yes	Yes
Consolidated London Properties Ltd	1911-1963	Yes	Yes
Corbett and Newson Ltd	1936-1964	Yes	
Great Winchester Street Estates Ltd	1929-1966	Yes	
Gresham House Estate Co Ltd	1853-1950	Yes	Yes
Metropolitan Properties Co Ltd	1947-1963	Yes	
Westminster and Kensington Freeholds Ltd	1910-1934	Yes	
Woodgate Investment Trust Ltd	1932-1964	Yes	

All of these companies were active in the Central London property market, although the size of each and the extent to which they were involved in the City office market differed. For instance, Broad Street Estates owned only a small group of offices in Old Broad Street (nos. 105-108) whereas Consolidated London owned shops, offices and flats across London. The companies were all founded prior to the Second World War and, in the post-war UK property boom, several of them became vulnerable to takeover. The fate of six is mentioned in Broackes (1979), with four of the companies taken over by the Trafalgar House group.

Between the different companies, the span of years covered and the amount and type of surviving records for those years varied considerably. Where rental evidence was found, this did not necessarily relate to the full span of years shown in Table 1. For instance, in the case of Corbett and Newson Ltd, details of rents and leases were only available at a single point during 1957. This means that the data from this company would not be useful for any method that relies on using pairs of rents through time to create an index.

Other companies had very long spans of rental evidence for their properties. This was primarily in cases where property management records had survived; in particular, rent rolls or lease registers. Of these documents, lease registers are the most detailed, recording not just rent, but also the terms of any letting, such as lease length and the amounts of any service charges. Rent rolls, meanwhile, show the rent and charges collected each quarter from each tenant, but the lack of other details means that more caution is needed in interpreting the information. For instance, changes in rent may reflect provisions in a lease for a fixed uplift rather than market rental levels, whilst a change of tenant may be due to assignment of an existing lease. Therefore, in using rent rolls, only changes in both rent and tenant were used to create observations unless explicit supporting evidence of a new lease could be found in other documents.

Where such documents related to office buildings within the City, the information was transcribed into electronic format (Excel). From these files, data can be prepared for the process of index construction. Although the final method has not been chosen, repeat measures techniques will be among the methods tested. Hence, the following

description of the dataset refers both to the number of observations gathered and the number of rental pairs that can be made.

The total number of observations stands at over 9,000, from which approximately 5,500 pairs of rents can be constructed. Yet, whilst these figures are large, they do not guarantee that every year of the study period is represented or that observations are evenly spread across the study area. Therefore, some exploration of these features is necessary. Figures 1 and 2 begin by displaying observations and pairs through time, respectively.

Figure 1: Observations in the dataset; distribution through time

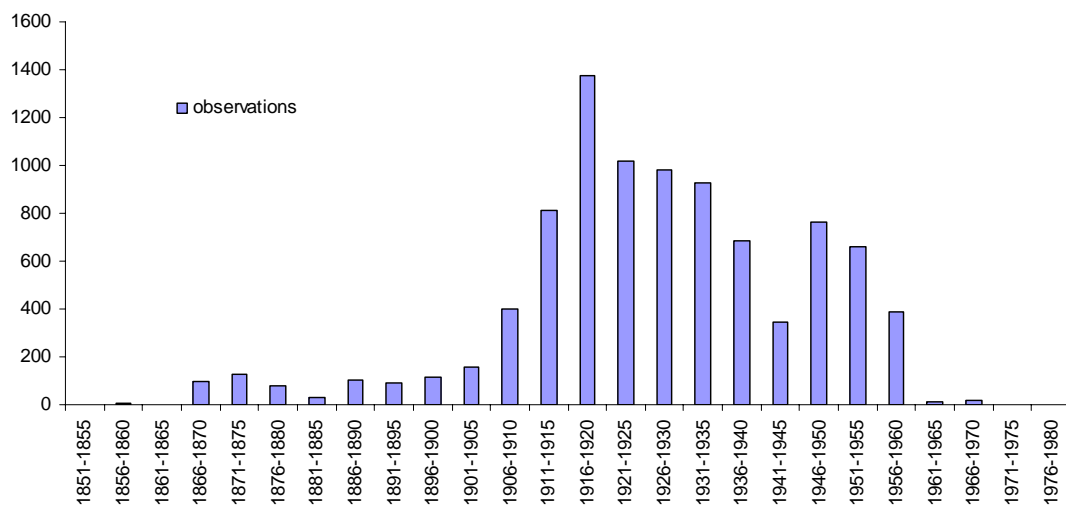
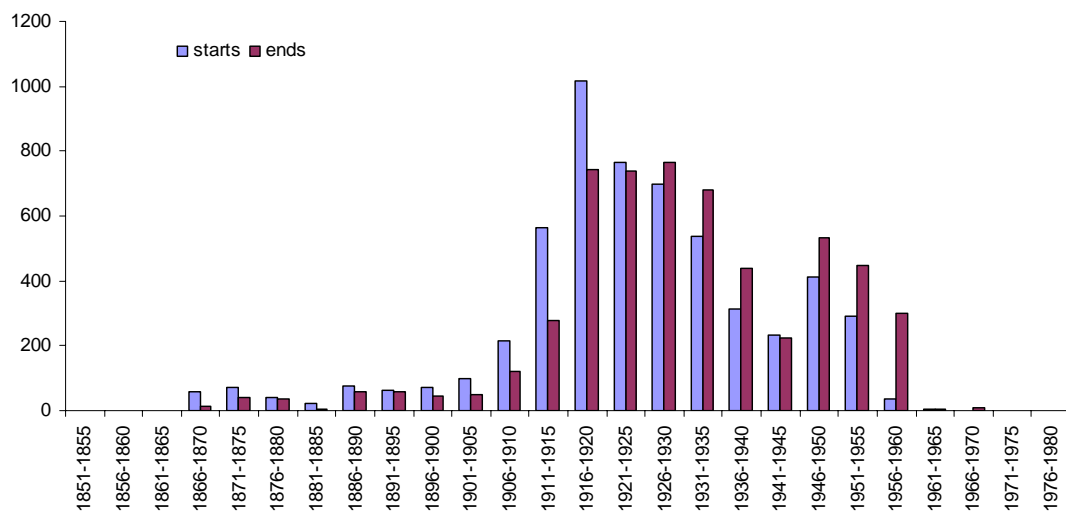


Figure 2: Rental pairs in the dataset; distribution through time



There is little difference between the graphs in terms of data distribution. Whether all observations or just paired ones are considered, most of the data lies in the period 1905-1960. Smaller, but potentially useable samples are present over the period 1866-1905. However, the very small samples for the 1960s may give rise to problems in linking the historical index to secondary sources.

Figure 3 displays the location of the properties in the sample, concentrating on those where paired observations could be formed. Altogether, there are observations for 51 distinct office assets and paired rents for 46 of them⁶.

Figure 3: Location within the City of London of properties in the sample
Displaying properties that produce 1 or more paired observations



Locations determined using Historic Digimap, © Crown Copyright and Landmark Information Group Limited 2007. Location co-ordinates found using Digimap Carto, © Crown Copyright/database right 2007. An Ordnance Survey/EDINA supplied service. The author is grateful for the help of Peter Byrne of the University of Reading in producing the map derived from this information.

⁶ There is a question regarding what constitutes a distinct office building. Sometimes a company would own adjacent properties, which notionally might be different, but in reality be managed as a single asset/complex. Where this was so, as in the case of nos. 22-27 Old Broad Street, they have been classed as a single asset for this research.

The map shows that most parts of the City of London are represented in the dataset. There is, however, some bias towards the east side of the City and two distinct clusters on the east side can be observed. The northern cluster lies on Old Broad Street, between the site of the Stock Exchange and Liverpool Street Station. The southern cluster is close to Lloyd's.

Finally, it is also important to check whether any particular properties are dominant within the dataset. Although there are 51 distinct assets, Table 2 shows that 5 assets account for over half of the observations. Meanwhile, the largest ten assets account for just over two thirds of the dataset. Therefore, despite the spatial spread apparent in Figure 3, there may be issues of concentration that need to be explored further.

Table 2: Contribution of individual properties to dataset – largest 5

<i>Property</i>	<i>Owner</i>	<i>No. of leases</i>	<i>No. of pairs</i>
Gresham House	Gresham House	1,247	646
Leadenhall House	City & West End	1,128	828
Broad Street House	City & West End	965	604
Temple Chambers	Consolidated London	770	474
Billiter Buildings	City & West End	743	490
	All properties	9,198	5,592
	% of totals	53%	54%

5. Summary and research programme

This paper has focused on the creation of a rent database as part of a wider project exploring links between commercial office rents and the UK economy. This task has involved research into existing data sources, the establishment of parameters for data collection and an extensive exploration and recording of archive material held at the Guildhall Library in London.

The collection of primary rental evidence is now virtually complete and so the focus of the research over the next year will be index construction. This stage presents a number of challenges. Before any methods are tested, issues relating to interpretation of the transactions must be addressed. For instance, what is the impact of clauses relating to repairs, rates or service charges, and how might changes to these clauses over time affect comparison of rents between different decades? The strengths and weaknesses of different transaction-based methods then need to be considered, both generally and with reference to the nature of the data that has been gathered. Different documents have yielded information of varying depth on lease transactions. This may mean that data intensive techniques, such as hedonic analysis, could only be applied to part of the dataset, if at all.

Whilst this stage is underway, further consideration also needs to be given to the final analysis. In the literature encountered so far, some of the main long run determinants of City office rents can be identified. Unsurprisingly, these include economic growth, structural economic change and technological changes (affecting either the supply or use of offices). However, a framework for this analysis still needs to be defined, whilst measuring such determinants and the nature and timing of their impacts will not be straightforward. Yet it is hoped that this research will provide some insights in this area and, hence, add to existing knowledge on the characteristics of commercial real estate as an asset and a market.

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