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<td><strong>Authors(s)</strong></td>
<td>Attuyer, Katia; MacLaran, Andrew; Williams, Brendan</td>
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<td><strong>Publication date</strong></td>
<td>2009</td>
</tr>
<tr>
<td><strong>Series</strong></td>
<td>Urban Institute Ireland Working Paper Series; 09/01</td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>University College Dublin. Urban Institute Ireland</td>
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<tr>
<td><strong>Link to online version</strong></td>
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Katia Attuyer, Andrew MacLaran and Brendan Williams
University College Dublin

Working Paper Series: UCD Urban Institute Ireland

© Katia Attuyer, Andrew MacLaran and Brendan Williams

ISSN: 1649-3613

UCD Urban Institute Ireland
University College Dublin,
Clonskeagh Drive,
Clonskeagh,
Dublin 14
Ireland

www.ucd.ie/ului/

This working paper can be downloaded as a PDF at
www.uep.ie
Changing office location patterns and their importance in the peripheral expansion of the Dublin region 1960 – 2008

Katia Attuyer\textsuperscript{a}, Andrew MacLaran\textsuperscript{a} and Brendan Williams\textsuperscript{b,c,*}

\textsuperscript{a}Department of Geography, Trinity College Dublin
\textsuperscript{b}UCD School of Geography, Planning and Environmental Policy
\textsuperscript{c}UCD Urban Institute Ireland

Abstract
Recent development patterns have seen the urban region of Dublin evolve from a compact urban form towards a dispersed development pattern assisted by a shift in service-sector employment. In particular, this paper examines the movement of the office sector towards a number of suburban locations over the period from 1960 to 2008. It outlines the manner in which the geographic location of office development in Dublin has been transformed over recent years from one which focused primarily on a single dominant core from the 1960s until the 1980s, towards one in which numerous and widely-spread suburban sites tended to account for a growing proportion of new developments during the 1990s and early 2000s. The implications of this emerging pattern are of significant importance to the long term development of the region.

Keywords: Urban form; property development; Dublin; offices; services sector.

1 Introduction
Peripheral expansion of urban areas such as occurred in Dublin can be linked to the evolving spatial patterns of local commercial and residential development (MacLaran, 2003; Williams, 2006). During the past four decades, commercial activity has moved outwards from the traditional central business district of cities to suburban locations. This trend has continued in the recent decade with a trend towards the development of suburban office parks. Such trends have major implications for the cities development and transportation patterns and has been accompanied by the dispersal of population to the hinterland of the metropolitan region. This has resulted in the rapid residential development of towns and villages at increasingly longer distances from Dublin. The continued decentralisation of employment and population to suburban locations along transport infrastructure and the impacts of emerging sub-centres on urban spatial structure are a major feature of the analysis of the development of major metropolitan areas.

This study explores the role that the shift in service-sector employment has played in reshaping a previously more compact urban form of development in the Dublin region to an increasingly dispersed pattern of development. In particular, the paper examines the movement of the office sector towards a number of suburban locations over the period from 1960 to 2008. It outlines the manner in which the geography of office development in Dublin has been transformed over recent years from one which focused primarily on a single dominant core from the 1960s until the 1980s, towards one in which numerous and widely-spread suburban sites tended to account for a growing proportion of new developments during the 1990s and early 2000s. This has resulted in the rapid development of towns and villages at increasingly more distant locations from major cities and the creation of widening patterns of commuting (Murphy, 2004; Williams and Shiels, 2000, 2002).

Such continued decentralisation of employment and population to suburban locations and the impacts of emerging sub-centres on urban spatial structure continue to be an important feature of the analysis of the development of major metropolitan areas. In turn, the common failure to provide adequate public transport infrastructure to serve such emerging suburban and 'edge-city' employment nodes, together with the consequent reliance on commuting...
Changing office location patterns and their . . . Attuyer et al.

by car, possess further major ramifications and generates growing demands for costly road improvements (MacLaran and Killen, 2002). A sprawling metropolitan region emerges, characterised by rapid peripheral expansion marked by inadequate and congested commuting infrastructures, requiring rising levels of energy use, resulting in increased levels of pollution and occasioning a reduction in environmental quality. Discussions on the transport issues raised by this pattern have been ongoing with examples of suggested realignments of transport provisions illustrated in Figure 1.

Figure 1 – A model for public transport and office nodes

2 The Spatial location of office type developments

Compared to the importance of office employment in developed economies, studies examining the geography of office buildings are relatively few. Early studies attempted to explain the tendencies for offices to congregate in city centres. As early as the 1920s, a pioneering study by Haig (1926) highlighted that the need for face-to-face exchange of information as a major factor accounting for the concentration of office activities in central cities, being the location characterised by the highest degree of accessibility. Between the 1920s and the 1980s, studies brought few major changes to this theory but focused on refining it (Matthews, 1993). The concentration of offices in central business districts has been interpreted as resulting from the benefits brought by spatial clustering (Coffey and Sheamur, 2002). Office firms are dependent on the exchange of information and knowledge with other firms and clients in their day-to-day activity. The costs of locating downtown (including rents and property taxes) have traditionally been offset by the advantages brought by the proximity to other service providers and the access to major infrastructures (Coffey and Sheamur, 2002). Therefore, office firms are willing to pay high rents to locate in these districts. As a consequence of bid-rent competition, there is a concentration of office functions in specific areas to the detriment of residential or industrial functions.

However, recent decentralisation of office activities has led increasingly to a questioning of the relative importance of agglomeration economies in the contemporary geography of offices. Technological changes, notably with regard to telecommunications technology, have introduced flexibility regarding the need for face-to-face contacts and have reduced the locational constraints on office functions (Daniels, 1985; Matthews, 1993). A significant body of recent literature has therefore focused on changing end-users’ needs in the hope of accounting for the recent suburbanisation of office developments. For instance, Fernie (1977) stressed that there was considerable inertia in the location of office firms. Firms that were considered more likely to decentralise because of the nature of their activities were found to be more likely to relocate. However, the focus on end-users’ requirements stemmed from an unstated assumption that demand was automatically translated into supply via the sorting mechanisms of the market.

Property development is more than a simple translation of demand into processes of supply (MacLaran, 1993, 2003). In the last 30 years, several authors have challenged the validity of interpreting the location of office users as a mere reflection of their preferences and needs. For example, Alexander (1979) stressed the need to give consideration to supply-side influences. Similarly, Donnay (1985) stressed that office occupiers have to face constraints in relation to the supply of space when making locational decisions and argued that:

‘Decision-making in terms of office location remains, for the user, mainly intuitive and does not correspond to the search for an economical optimum. [The property market] is supposed to follow the fluctuations of demand in terms of the quantity of space produced as well as in terms of its location. Is it not exactly the opposite? Demand has nearly no constraints economically justified. On the other hand, the first studies have highlighted the importance of the availability of office space
on the market as a factor in the choice of location listed by office firms. To what extent, is it not supply that guides the location of office activities?' (Donnay, 1985)\(^1\)

Pivo (1993) also contended that ‘the pattern of office development may result at least as much from speculative developers interacting with public land policy-makers as from rational economic location decisions of office tenants’ (Pivo, 1993). The work of other authors, such as Crouzet (1998, 2001, 2003a,b), Malézieux (1995) or Bateman (1985), has also helped to understand better the role of supply-side actors in explaining the geography of offices.

Office development serves two distinct markets; an accommodation or user market in which the occupation of space is undertaken to permit certain functions to be undertaken, and an investment market in which the ownership of office buildings provides an investment yield in the flow of income from rental payments. This dual function of the office development sector is especially important since office occupiers increasingly rent their space, the proportion of owner-occupiers having significantly diminished over the last three decades (MacLaran, 2003).

Office development is therefore dependent on the profit strategies of the various actors in the development process, amongst which property developers play a key role (MacLaran, 1993, 2003). Developers and other actors will only engage in development in locations where they perceive their profitability criteria can be met. Profitability will be influenced by a variety of factors and will vary geographically. Therefore, the development of office buildings will not be undertaken as a simple reflex response to user demand. While the latter is important, as ultimately the developer’s profit will depend on user take-up, it is necessary to consider strategies for profit maximization and / or risk minimization by developers in order to understand the geography of office development. Thus, developers and financiers may tend to favour certain districts, such as the centre of major metropolitan areas, which are associated with low risk. Therefore, by favouring certain areas, the property industry contributes to the uneven distribution of office space.

Planning policies, user requirements and property development interests all interact to influence the location of office development. At a time when widespread suburbanisation cannot be explained fully by the changing requirements of office space users, it is essential to give attention to the complexity of factors involved. For example, changes in public policies can have a direct effect on the profitability of a location. Therefore, the peripheralisation of office development can be due as much to the suburbs’ becoming a profitable location as to the rise of new technologies allowing office firms to locate further from the centre and nearer to their labour pool (Bertz, 2002b).

3 Office suburbanisation

The factors underlying the geography of office development activity are not the only source of debate in the literature. Different perspectives exist with respect to the significance of the recent growth in office space located in suburbia and on the spatial patterns of this growth.

First, there is disagreement on the form taken by office suburbanisation. A large body of research, especially on American cities, identifies a new urban landscape where office employment is pre-eminently dispersed randomly throughout the suburbs, resulting in a sprawling low-density metropolitan form. For example, Lang (2003) examined the distribution of office space in 13 metropolitan areas in the United States and found that a majority of suburban offices (two-thirds) was located in what he named ‘edgeless cities’. These comprised a form of development consisting of ‘isolated office buildings or small clusters of buildings of varying densities over vast swaths of metropolitan space’ (Lang, 2003). However, other studies have found that suburbanisation has occurred mainly in the form of concentrations of office activities in a few nodes in the suburbs, known as ‘edge-cities’ or ‘suburban downtowns’ (Garreau, 1991). Gordon and Richardson (1996) refer to these two distinctive spatial structures by the terms ‘polycentrality’ and dispersal.

The limited number of empirical studies existing on the subject and the difficulty of gathering data sets allowing meaningful comparisons to be made therefore calls for prudence when attempting generalisations. For example, Canadian and European cities tend to be less dispersed than their American counterparts, while variations can also be present within countries. Shearmur and Coffey (2002) compared the spatial distribution of office employment and its evolution in four Canadian cities. They found three different patterns, stressing the imperative not to overemphasise convergences and the need to pay attention to place-specific conditions such as planning policies that might explain local variations. However, despite divergence in the literature regarding the exact pattern of office suburbanisation, it is accepted that, in recent decades, the highest rates of office growth have been found in the outer areas of

\(^1\) Author’s translation from the original
cities.

The significance of the surge in office development in suburban areas has also been a point of some contention. The decentralisation of office activities has been interpreted by some authors as a sign of decline and crisis of the central city and its CBD (Cervero, 1989; Garreau, 1991). However, a few researchers have shown that the growth of suburban office centres might not necessarily indicate a weakening of the CBD. For instance, Coffey et al. (1996) found that while the growth of office employment in the suburbs of Montreal was associated with a relative decline of the CBD, there had been no reduction in absolute terms. Most high-order services had recorded absolute growth. In the case of Montreal, the growth of the suburbs was instead interpreted as a sign of a strong centre rather than as a sign of its decline, the CBD being unable to accommodate all the expansion of office-based activities in the metropolitan economy. The CBD in this case had become more specialised, the suburbs and the centre being complementary to rather than competitive with the city centre’s operations.

Crouzet (1998) drew a similar conclusion in his study of Toulouse. For him, polycentricity did not necessarily result in a decline of the centre. As in the case of Montreal, he found a specialisation of the centre and of the suburbs in different activities, with the suburbs of Toulouse accounting for 44% of back-office activities but only 29.5% of all office developments. Central locations remained highly sought places by office firms, especially by high-order service providers. The demand for such locations remained high and the inability of the centre to cater for all this demand had resulted in suburban growth.

There are also considerable variations in the proportion of office space found outside the central city of different metropolitan areas, the highest levels being generally found in the United States. For example, Lang (2003) found that only two out of the thirteen major American metropolitan areas he studied had more than half of their office space in their downtowns. These were New York and Chicago. In contrast, Atlanta had 66% of its office space in suburbia. The degree of suburbanisation seems to be less marked in Canada (Charney, 2005), with the largest metropolitan areas having at least half their office space in inner-city districts. Similarly, Halbert (2006) showed that central districts continue to play an important role for office activities in European cities. Amongst the seven urban regions he examined, Paris was the city with the highest proportion of office space in its central area (76.7%) while this figure lay between 60% and 65% for a further four cities. The lowest values were recorded in Frankfurt (49.6%) and London (47.1%).

3.1 Dublin: Historical Urban Form and Office Development

The development of modern Dublin in the period from the eighteenth century involved the building and restoration of major public buildings as well as the expansion to the modern city which developed the architectural and historical character of the central city (Craig, 1952). Rapid eighteenth century growth resulted in the development of the grand residential districts, Georgian squares and street system in evidence to modern times. The decline following the Act of Union of Dublin in the nineteenth century is seen as evidence of the declining economic and political role of a city which had lost its function as a capital. The first moves towards the planning and regeneration of the modern city were undertaken in the reconstruction of the city following the wars and political upheavals of 1916 to 1922 (Bannon and Bradley, 2007). As capital of the newly independent state, the expansion of the city greatly increased. The impact of this expansion on the built environment is seen in the expansion of the system of administration of the new independent state which involved the need for a considerable amount of office space. This office space was developed in the areas surrounding the new centre of Government at Leinster House in the south east section of the city centre. This area has continued to the present time as the focal point for the location of government departments and general office activities.

The period following World War II saw a trend in both public housing programmes and private developments which was firmly towards suburban development along radial routes from the city, engulfing existing smaller suburban settlements. Major infrastructure changes with far-reaching consequences occurred during this period, marked by the closure of the urban tram system and part of the suburban rail network as part of a short-term public expenditure cost cutting exercise.

The late 1950s also witnessed the commencement of a major period of industrial and economic development. In Dublin this resulted in a more dispersed population having increasingly to depend on the private motor car as a means of transportation. A major expansion in suburban retail shopping facilities led to new centres being developed with ample car parking and services, these first became the focus for food and later non-food retail sales and
service sector activities.

The inner-city area particularly north of the River Liffey was mainly avoided by office developers over this period. The poor physical environment caused by decay and neglect and the generally unattractive image of the area associated with fears of high crime rates and vandalism meant that developers and potential tenants avoided the area. This trend continued despite attractive planning plot ratios and lower site values. A widening gap therefore occurred between the developing central business district mainly south of the River Liffey and the increasingly run down inner-city areas. This persisted until the major commercial property led urban regeneration schemes of recent decades.

3.2 The changing geography of office supply, 1960-2007

In the period since 1960 the geography of office development in Dublin has been transformed from one which focused on a single dominant core towards one in which numerous and widely-spread suburban sites have tended to account for a growing proportion of new development in the 1990s and early 2000s.

Dublin has grown more rapidly in the last fifty years than in its previous history. It has been transformed from a relatively compact city to a sprawling metropolis. The residential population was first to suburbanise, the suburbanisation of the city’s upper and middle classes being followed by the planned relocation of poorer inner-city communities under programmes of slum clearance and rehousing (MacLaran, 1993). This was followed from the 1960s by the movement of industrial functions to purpose-built suburban industrial estates and the suburbanisation of retailing (MacLaran, 1993; MacLaran and Beamish, 1985).

Historically, city centres had played the primary role as office locations because of their high degree of accessibility for both workforce and clients, combined with the advantages brought by personal and business interaction afforded by the proximate clustering of companies and public-sector operations. This was especially true at a time when commuting was more dependent on public transport services, commonly organised on a radial basis to bring workers from residential suburbs to the central business area. Dublin was unexceptional in this regard.

Until the 1960s, most of the city’s office functions were overwhelmingly concentrated in the city centre located, in major part, in buildings which had originally been developed for residential occupation but which had subsequently been converted to office use.

During the 1960s, the focus for office development lay in the central city postal district of Dublin 2 and the high-status inner suburb of Dublin 4. These comprised the most prestigious and best preserved parts of Dublin’s townscape. Developed from the early eighteenth to late nineteenth centuries, these districts were already undergoing functional transformation with their residential accommodation becoming increasingly converted to office use.

The development of new office buildings accelerated the existing trend towards functional upgrading and, by the late 1960s, Dublin 2 and Dublin 4 had become established as the city’s prime office core. Some 45 office developments, comprising 123,048 m² of net floorspace, were completed during the 1960s, 27 being located in Dublin 2, with 12 in Dublin 4. Development in Dublin 2 accounted for 72,471 m² of floorspace, comprising 59% of the total. Office space built in Dublin 4 represented 37,040 m² and 30% of the total. The development of office space in suburbia was very limited during that period. In fact, suburbanisation of modern (post-1960) office development in Dublin commenced only on a small scale with the construction of Esso House (3,038 m²) in Stillorgan in 1960. The year 1969 saw the further development of suburban office space in Booterstown. Again, this was on a very small scale with less than 600 m² being developed. With little increase in the suburban stock, by the end of the 1960s the stock of office space in suburbia amounted to 3,595 m² from a city-wide total of 123,047 m², representing less than 3% of the total.

During the 1970s, 142 office developments reached completion in Dublin. While their geographical spread widened, only 20% of these were situated outside Dublin 2 and Dublin 4. These included the completion of geographically dispersed buildings in the inner-city postal districts of Dublin 1, 7 and 8 fringing the prime office core. There were also developments further away in the inner-suburb of Dublin 6. However, by the end of the 1970s, little dispersal had taken place to the outer suburbs, only 8 of the 142 office buildings completed during the 1970s being located in the outer suburbs. Although the city’s outer southern suburbs of Stillorgan, Dundrum, Cabinteely, Dun Laoghaire, Leopardstown, Booterstown and Clonskeagh recorded some office development activity, no suburban ‘proto-nodes’ had yet begun to emerge. In the northern outer suburbs, the only office development to be completed was Raven House (2,908 m²) in Finglas. Despite this increase in suburban development activity, by
By the end of 1989, the city-wide stock of modern office totalled 973,845 m² in 365 developments.

In the early part of the decade, Blackrock and Dun Laoghaire emerged as focal points for development. Eleven buildings totalling 15,258 m² were completed in Blackrock, four of which exceeded 2,000 m² (Temple House, Blocks 1 and 2 measuring 2,861 m² and 2,508 m² respectively, with Frascati Hall at 2,196 m² and Enterprise House at 2,787 m²). The quantity of space reaching completion in Dun Laoghaire also increased markedly, with 5 developments totalling 8,241 m² being developed, comprising almost twice the amount built there during the preceding decade. There was also significant development of isolated buildings across a wide range of outer-suburban locations, for example at Ballybrack, Glenageary and Kill O’ the Grange to the south and at Santry and Swords in the north. Some of the development schemes built during that decade represented the first modern office elements at locations which were subsequently developed into important suburban office nodes, such as at Clonskeagh and Sandyford-Leopardstown. Nevertheless, in spite of this increasing geographical breadth of development activity, the city centre remained the dominant office location throughout the 1980s.

By the end of 1989, the city-wide stock of modern office space totalled only 31,600 m² of modern office space had been developed in suburban locations, amounting to just 5% of the total stock (591,749 m²).

In the 1980s, development locations began to exhibit a slow outwards evolution with a growing interest being shown by developers in more peripheral areas. During that decade, a further 382,096 m² of office space was built, with some 46,389 m², amounting to 15.2% of the total, being located in the outer suburbs (Figure 2).

Figure 2 shows that some 76% of this space was located in the postal districts of Dublin 2 and Dublin 4. Despite thirty years of suburban office development, by the end of the 1980s, the stock of suburban space amounted to only 91,905 m² (9% of the total). No suburban district possessed a stock of modern (post-1960) offices amounting to more than 20,000 m². Although the Dublin 16/18 district did have a quite substantial stock amounting to 18,987 m², this was geographically widely dispersed over several locations. Very little development had taken place in either the western or northern outer suburbs. Thus, only two areas of significant clustering had emerged, at Blackrock, with a stock of 15,258 m², and Dun Laoghaire with 13,119 m². A further 16% of the stock was located at the periphery of the prime office core in Dublin 1, 7 and 8 (Figure 3), which comprised several developments which had been undertaken partly in response to the Designated-Areas regeneration tax incentives of 1986.
The 1990s were marked by a dramatic increase in development activity. Rapid economic expansion, especially towards the end of that decade, generated a growing demand for office space to accommodate the expanding services-sector workforce. With 681,579 m² of space being developed in 238 buildings, the stock of modern (post-1960) office space in the city grew by 70% from 973,845 m² in December 1989 to 1,655,424 m² by the end of 1999. During these years, 23 developments completed. While only 6% of the total was built in Dublin 4, in contrast, the suburbs accounted for 48% of the space completed. While only 6% of the total was built in the longer-establish suburban nodes at Blackrock and Dun Laoghaire, the proportion of the city’s stock of modern office space located in these suburbs rose from 2.9% in December 1989 to 4.3% in December 1999.

The 1990s, the geography of office supply also widened considerably, to an extent which was quite unlike the patterns observed in previous decades (Figure 4).

Figure 5 contrasts markedly with the distribution depicted in Figure 2. It reveals that, during the period 1990-1999, only 21% of the office space that was developed was situated in Dublin 2, with a further 9% being located in Dublin 4. In contrast, the suburbs accounted for 48% of the space completed. While only 6% of the total was built in the longer-establish suburban nodes at Blackrock and Dun Laoghaire, the proportion of the city’s stock of modern office space located in these suburbs rose from 2.9% in December 1989 to 4.3% in December 1999. During these years, 23 developments comprising 42,833 m² were completed in these locations, more than doubling the amount of office space there from less than 29,000 m² at the beginning of the decade to over 71,000 m² in December 1999. A total of thirteen buildings (17,280 m²) were built in Blackrock, including five in Temple Road amounting to 4,900 m². A slightly greater quantity of space reached completion in Dun Laoghaire (25,553 m²) with six buildings in the Adelphi Centre comprising 14,125 m².

In the 1990s, development also continued apace in places which had shown only embryonic development in 1980s, most notably Clonskeagh and Sandyford-Leopardstown rapidly emerging as significant suburban office nodes in their own right. Indeed, as shown by Figure 4, although there had been some development in the southern suburbs in the previous decades, it was not until the 1990s that the full force of development activity became focused strongly on the city’s southern suburbs.

From having an office stock of just 5,968 m² at the end of 1989, Sandyford-Leopardstown experienced a seven-fold expansion of its modern office stock, rising to 42,135 m² of floorspace by the end of 1999. Growth at Clonskeagh was even more dramatic. From a stock of 4,037 m² at the end of 1989, office space located here increased fifteen-fold to total some 62,995 m² by the end of 1999. As a consequence, by the end of the 1990s, both areas had become office nodes of some significance, the office stock in both Sandyford-Leopardstown and Clonskeagh exceeding the quantity of space located in either Blackrock (32,538 m²) or Dun Laoghaire (38,671 m²).

Scattered developments also continued to reach completion in the southern suburbs at locations such as Stillorgan, Cabinteely, Dundrum and Kilmacud, bringing the total area of space completed in the southern suburbs during that decade to over 127,000 m², representing 19% of the city-wide space completed during the 1990s.

The most striking feature of office development activity during the 1990s is the completion of new schemes of significant size in the city’s western and northern suburbs, which had remained relatively undeveloped locations for office development at the start of the decade. For example, Dublin’s north suburbs, with a stock of only 3,820 m² had accounted for just 0.4% of the city total in December 1989. However, by late 1999, the northern suburbs accommodated a stock of 79,640 m², a twenty-fold expansion of its modern office space and representing 19% of the city-wide stock. Activity in the northern suburbs was particularly intense in the second part of the decade with the appearance of a new node in the inner-suburb of Dublin 3. The development of the East Point Business Park, where 63,000 m² were developed, was strongly influenced by the existence of the Enterprise Zone and represented the largest increase registered at any suburban node. Elsewhere in the northern suburbs, scattered completions also occurred in Swords and Santry.

Office development also took place at new suburban locations on the western edge of the city, the city’s western suburbs representing the most recently developing office location. At the end of 1989, only 1,300 m² of modern office space had been located in these areas. During the 1990s, offices were com-
pleted at a wide range of sites. Proto-nodes appeared at the outer western suburbs of Tallaght, at Baldonnell and along the Nangor Road. In Tallaght and at Park West on the Nangor Road, development was boosted by the availability of fiscal incentives. In Tallaght, between 1993 and 1998, 12 schemes totaling over 27,350 m$^2$ of office space reached completion. In one year alone, 1999, 27,205 m$^2$ of office space was completed at Park West Business Park. During the late 1990s, some 16,180 m$^2$ of offices were also built at Citywest (Baldonnell, Dublin 24). Smaller schemes reached completion at a range of locations across the western suburbs including Blanchardstown and Clondalkin. Thus, within a single decade, the stock of office space in the western suburbs increased from just 1,300 m$^2$ to 81,398 m$^2$, accounting for 5% of the city-wide total.

Overall, the expansion of development activity was dramatic in suburbia during the 1990s. While the first part of the decade had been marked by a rising scale of office completions at the urban periphery, the suburbanisation of office development mainly accelerated in the second part of the decade (Figure 6(a) and Figure 6(b)). Between 1995 and 1999, the scale of completions rose to 226,192 m$^2$ in the suburbs (not including the more established suburbs of Dun Laoghaire and Blackrock), which represented 54% of the city-wide activity (Figure 5). This resulted in the expansion of the suburban stock to 346,294 m$^2$, comprising a near tripling in the 5-year period.

The early years of the new millennium marked a peak in the scale of office development with 765,292 m$^2$ being completed between 2000 and 2004, 110% of the output recorded during the previous 10 years. The geography of development continued to exhibit a marked trend towards suburbanisation during that five-year period. Figure 6 shows that 63% of the office space built was located outside the central city. Development focused on the outer area of Dublin, especially on the western (23%) and southern outer suburbs (24.5%). The longer-established nodes of Blackrock and Dun Laoghaire were marked by a relative slowdown in the scale of office development activity, with respectively some 5,000 and some 15,000 m$^2$ being built in these areas, amounting to only 2.7% of city-wide completions.

For the other suburbs, the period was marked a major increase in office development, which is unlikely to be matched in the near future. In many locations, the quantity of space reaching completion during 2000-2004 exceeded the total existing stock which had been developed there since 1960. This included Sandyford-Leopardstown, Nutgrove,
Santry, Swords, Nangor Road, Citywest and Blanchardstown.

Very few suburban locations which had previously attracted office developments failed to register an increase in their modern office stock during the period (Stillorgan, Booterstown, Ballybrack, and Sutton Cross) and only one new location, City Junction/Malahide Rd. in the north-east suburbs, emerged as an entirely new development location with 3,159 m² reaching completion there.

The suburban office node which recorded the largest development of space was at Sandyford-Leopardstown where 134,437 m² was built in 27 schemes. This marked an impressive increase in the scale of activity compared to the previous 10 years, when just over 35,000 m² had been developed. It also represented over 70% of the floorspace reaching completion in the outer southern suburbs during this five-year period. Many of these new blocks were of substantial size and were amongst the largest office blocks in Dublin. For example, the Atrium buildings I and II each exceeded 13,260 m², while block E of Central Park was over 20,000 m² in extent.

The rapid surge in office development was facilitated by the introduction of new zoning categories by the planners of Dun Laoghaire-Rathdown county who sought to improve the yield from commercial rates. Formerly industrial land was opened to upgrading by being rezoned from industry to office-based industry (Bertz, 2002b). Its position near the M50 also encouraged office development. By the end of 2004, the area had become one of the most important office locations outside the central area of Dublin, with a stock totalling 175,147 m², surpassing the combined stock of modern office space located in Blackrock and Dun Laoghaire (92,003 m²). However, by the end of 2004, the scale of development had outpaced user-demand, as the area registered a 20% vacancy rate.

Significant additions were also made at a number of locations in the western suburbs. Blanchardstown saw the addition of some 43,143 m² to its stock, which had amounted to little over 5,000 m² in 1999. Citywest, located in Baldonnel, on the Naas Road, registered an increase of 31,695 m², nearly tripling its office stock in five years. Considerable activity also took place in Dublin 22, on the Nangor road, where 51,645 m² was built, more than doubling the amount of development of the previous decade, but resulting in a high level of vacancy in the ensuing years. At the end of 2004, 53% of the stock was lying vacant.

Following such a sharp rise in office completions, by 2004 some 11% of the city’s stock was located in the western suburbs. However, a high proportion of this space was vacant, the western suburbs accounting for 28% of all the city’s vacant space.

The northern suburbs also registered a much higher level of development activity than previously. Significant expansion took place in Swords, where the completion of 14 buildings totalling 34,597 m² resulted in a five fold increase in the district’s modern office stock. A smaller quantity of space was developed in Santry (7,655 m²). By December 2004, the share of the northern suburbs in the city stock amounted to 6.8%.

However, these dramatic changes in the geography of office development in favour of suburban locations were curtailed in the period after 2004 because of rising rates of vacancy. Indeed, in 2004, over a quarter (27.6%) of all suburban modern office space lay vacant and these vacant suburban buildings accounted for almost 64% of all vacancy in Dublin. Peripheral vacancy rates ranged from 18% in the southern suburbs, and 33% in the north to 42% in the western suburbs. In comparison, the vacancy rate for the modern office stock in Dublin 2 was just 8%. With growing international economic instability and rising levels of city-wide vacancy rates, particularly in suburbia, developers reacted by cutting their scale of activity, while financiers and investors swiftly withdrew their involvement in a number of suburban locations. The period after 2004 therefore marked a general scaling down of suburban development.

The total quantity of space that reached completion in Dublin between 2005 and 2007 amounted to 421,403 m², of which only 23.4% was suburban (98,591 m²). As shown by Figure 8, office development activity in the suburbs mainly focused dur-
3.3 The location of space taken up and geographical variations in vacancy, 1990 – 2007

This section examines the extent to which market demand alone could have led to large-scale suburban office development in Dublin in the 1990s and early 2000s. Reviewing trends in take up and in vacancy rates, it hypothesises that the recent suburbanisation of office development was not entirely occupier-driven.

3.3.1 Take-up

The mid- and late-1990s were years of rapid economic growth in Ireland. Rapid expansion of the services sector fuelled the demand for office space. As shown by Figure 11, there was a marked increase in the quantity of office space taken up during these years. This period was also characterised by a growing representation of suburbs among the locations where demand was strong. Between 1996 and 2000, space taken up in the suburbs grew considerably, both absolutely (Figure 12) and relatively (Figure 13).

In 1995, the majority of space taken up was still located within the central area with Dublin 1, 2, 4, 7, 8 accounting for almost 73% of demand (Figure 13). However, by 2000, this figure had fallen to 64.5% and in 1996 reaching a low of just 30.9%. From 1996 to 2000, it was mainly developments in new outer suburban locations (i.e. excluding Blackrock and Dun Laoghaire) which recorded a sharp rise in space taken up (Figure 11). With only 25% of the modern office stock, non-traditional suburban locations accounted for over 65% of the space taken up during 2000. While significant increases in take-up...
in the northern and southern outer suburbs were recorded from 1996, the increase in space taken up in the western suburbs dated only from 1998.

However, from 2001 to 2007, there was a marked reduction in the proportion of take-up accounted for by non-traditional suburban areas. Figure 12 shows that these suburbs still accounted for about 50% of take-up in 2001 but that figure had fallen to 43% in 2004, with the year 2005 and 2007 marking low points at 33 and 34%. This reduction in the proportion of take-up accounted for by suburbia was associated with a growing geographical shift in take-up towards the fringe of the office core in 2005 and 2007. Take up in the inner-suburb of Dublin 4 was also particularly strong in 2005 (Figure 11), while the inner-office fringe of Dublin 1, 7 and 8 (excluding the IFSC) accounted for an unprecedented 76,111 m² in 2007, accounting for 25.6% of all the space taken up during the year.

3.3.2 Office Vacancy

Attention now turns to a temporal examination of office vacancy rates since 1990.

As shown in Figure 14, from 1994, the quantity of vacant space declined uninterruptedly for a period of five years to reach an historically low level by the end of 1999, when only 31,236 m² of office space lay vacant. This represented just 1.9% of the total stock. However, during the early years of the new millennium, the quantity of space lying vacant increased rapidly. By the end of December 2000, it had nearly doubled to 60,000 m². However, the largest increase occurred between 2000 and 2001, when the amount of vacant space grew four-fold, increasing further between December 2002 and the end of 2003 to reach almost 430,000 m². Thereafter, slow reductions in vacancy can be noted for 2006 and 2007.

Figure 14 also highlights the fact that, in absolute terms, a majority of the vacant space since 1999 has been located in the suburbs, marking a sharp contrast to the 1990s when most vacancy was located in the central city. In 1990, 65% of the city’s vacant office space was located in Dublin 2. This declined regularly over the following years and, by the end of 1999, the traditional office core of Dublin 2 accounted for only 19.5% of all vacant floor space, considerably below its proportionate share of the modern office stock at the time (44.4%).

Despite accounting for between 30% and 35% of the modern office stock, the outer suburbs have accounted for over 50% of the city’s vacant office space since 1999. The proportion of vacant space located in the suburbs peaked at 80% in 2000, fell to 71% in 2002 and decreased further after 2003. In December 2007, the vacant suburban stock accounted for 54.5% of the total vacant city-wide space.

By 2001, the scale of development in the suburbs, which reached a peak in that year, had far outpaced the scale of demand for space by occupiers, which declined significantly after 2000 (see Figure 15). This resulted in rapidly rising vacancy rates in the

Figure 11 – Location of Space Taken Up, 1990-2007. (Source: CURS TCD/SavillsHOK database)
Figure 12 – Space Taken Up in Dublin City and Suburbs, 1990-2007. (Source: CURS TCD/SavillsHOK database)

Figure 13 – Proportion of Space Taken Up in Major Office Locations. (Source: CURS TCD/SavillsHOK database)
outer suburbs, the vacancy rate rising to over 25% in 2001, from just 8.8% one year earlier. Again during 2002, despite the scale of completions reducing from the previous year, the scale of development far outstripped user demand. In 2003, despite considerable reduction in the scale of development, as older space also returned to the market the overall vacancy rate in suburbia again rose, peaking at 29.3%.

However, geographical significant variations can be noted, with the more newly-established locations having the highest rate of vacancy. Suburban vacancy rates were relatively low in the well-established node of Blackrock and Dun Laoghaire (19.3%), while vacancy exceeded 24% in the southern suburbs, 30% in the northern suburbs and were at their highest at 38.5% in the western suburbs (Figure 16).

Finally, sustained demand and a substantial slowdown in construction led to a drop in the overall vacancy rate in the outer suburbs, the vacancy rate stabilising at about 21% in 2006 and 2007, with still important variations remaining between the suburbs.

For the period 1990 to 2007, wide geographical variations in vacancy rates are apparent between the outer suburbs (Figure 16) and the central city (Figure 17). As depicted in Figure 17, the prime office districts of Dublin 2, Dublin 4 and the IFSC have been constantly characterised by a low level of vacancy. After 1995, when there was a marked suburbanisation of office development and of office take-up, vacancy rates in Dublin 2 were at their lowest. This confirms that the peripheralisation of office development was not a sign of decline of the central city but, rather, that it is evidence of its strength in that development in suburbia had complemented rather than competed with the traditional core. There was clear evidence of shortages of space in Dublin 2 in the mid-1990s and in the late 1990s, with vacancy rates as low as 0.8% in 1999. The vacancy rate rose sharply from 3.9% in 2001 to 7.3 in 2002% but remained stable in the following years at approximately 7%, remaining well below the vacancy rate in other parts of the city.

The outer suburbs present a marked contrast to the low rates of vacancy typifying the central-city office districts. In the suburbs, vacancy rates rose sharply after 2000, followed by a period of levelling off and eventually by a slow reduction (Figure 16).

The initial phase of increase in vacancy rates was particularly sharp in the northern suburbs, where the rate rose from 0.5% in 2000 to 26.3% by the end of 2001, when 37,913 m² was available. A majority (67.2%) was located at new developments in Swords in 2001. In the following years, clusters of vacant space were found in Swords and in the inner

![Figure 14 - Vacant Suburban and Non-Suburban Space, 1990-2007. (Source: CURS TCD/Savills HOK database)](image-url)
Figure 15 – Completions, Take-Up and Vacancy Rate in the Suburbs. (Source: CURS TCD/Savills HOK database)

Figure 16 – Vacancy Rates in the Suburbs, 1990-2007. Source: CURS TCD/SAVILLS HOK database
The western suburbs have regularly displayed the highest rates of vacancy, with rates typically exceeding 30% since 2000. A major cluster of vacant space appeared in the Nangor Road area. From 2002, significant clusters of vacancy also emerged in the Blanchardstown area, with Tallaght and Citywest also characterised by abundant vacant space.

The lowest rates of vacancy in suburbia have tended to be recorded at the established nodes of Blackrock and Dun Laoghaire. Elsewhere in the southern suburbs, vacancy rates sharply increased between 2000 and 2001 as completions forged rapidly ahead of demand. The vacancy rate fell below 20% only in the last two years, a majority of remaining vacancy being located in the Sandyford-Leopardstown area.

By late December 2007, suburban vacancy rates remained variable, ranging from 8.8% of the stock in Blackrock and Dun Laoghaire to 15.8% elsewhere in the southern suburbs, while vacancy in the northern suburbs stood at 27.8% of the stock and at a third of the stock in the western suburbs.

4 Conclusion
A major feature of office construction in Dublin has been the massive increase in development activity in the city since 1990, which represents the most intensive development boom in the history of the city to date. The 1990s have also witnessed a dramatic surge in office development activity at new non-traditional locations, particularly at new suburban sites. With the peripheral growth of office employment, Dublin displays a similar trend to other European and American cities which have seen considerable decentralisation of office activities in recent decades.

Recent years have been characterised by a pause in large suburban development due to the over provision of space in suburban districts, which have resulted in high vacancy rates. However, these new suburban nodes now account for a major share of Dublin’s office space and office employment, a large number of workers commuting to these new employment nodes daily, causing serious congestion problems as they tend to be poorly served by public transport systems (MacLaran and Killen, 2002).

The factors underlying this recent large-scale suburbanisation of office development in Dublin are numerous and complex. They can only briefly be considered here. First, changes in the wider economy during this period have had an effect on the scale of development in Dublin. During the 1990s, the Republic of Ireland experienced a period of sustained and exceptional economic growth, with annual growth rates well above those of other OECD countries. Ireland’s GDP grew strongly through the 1990s, at an average annual rate of over 5% and at nearly 10% in the closing years of the 1990s (Burrenham, 2003). This increase in GDP resulted in a sharp decline in the unemployment rate, which fell from 15% in the early 1990s to 4.3% in 2000. The
growth in employment was mainly due to a significant rise in services-sector employment, which grew by 40% between 1988 and 1998 (Travers, 1999). This unprecedented economic growth created a considerable demand for office buildings to accommodate the expanding services-sector workforce.

Moreover, on the user-demand side, a new type of demand for office space emerged, mainly from international clients. Expansion in the services sector led to strong growth in telecommunications, with firms providing a range of services from IT-related after-sales support to car-hire reservation services. Many had little need for central-city locations. However, they required a large amount of floorspace, good telecommunications infrastructure and low rents, which suburbs could offer (Bertz, 2002a). Moreover, suburban municipalities offered good provision of car parking space for employees, which was an attractive feature as the city centre became increasingly congested. At a booming time when companies needed to ensure adequate staffing, issues of access for a workforce which was overwhelmingly suburban in its residential location, were given growing consideration. Employers therefore tended to evaluate suburban locations in a favourable light.

The changing planning context in the mid-1990s was also a significant factor. Planning policies proved successful in drawing office development to locations that had not previously experienced office development. The reorganisation of the administrative structure of the metropolis created a fragmented administrative structure. This was followed by important planning changes, notably in the locations zoned for office development and in the tightening of certain development controls in the central city. Suburban local authorities, deprived of income following the abolition of residential rates in the late 1970s and a central-exchequer subvention which failed to keep pace with inflation, were eager to attract office and retail developments to generate commercial rates. New zoning categories such as ‘office-based industry’ were introduced which facilitated the rezoning of former industrial areas at the periphery (Bertz, 2002b).

Furthermore, in the central area of Dublin, conservation became more strictly enforced, reducing the number of suitable sites available for office development activity. This situation was worsened by the growing competition for available inner-city sites from alternative functions such as hotels and the development of apartments (Kelly and MacLaran, 2004). The cumulative effect of these factors was a profound change in the geography of office development in the Dublin area and, consequently, of office employment. Proposals for public transportation infrastructure investment relating to this new spatial pattern have been made but as yet are not occurring.

This had contributed to a major shift in the development and transport/commuting patterns in the Dublin region. As employment patterns became more dispersed and affordable housing at existing urban areas less affordable a push in residential demand towards dispersed locations within car commuting distance of Dublin occurred. This shift in the spatial pattern of employment and residential development will have a significant influence on the long term development of the region.

Acknowledgements

The authors would like to acknowledge the support of the Environmental Protection Agency (EPA) through the National Development Plan (NDP) under contract 2005-CD-U1-M1.

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