
The Growth in Office Take-up in Dublin's Suburbs: a Product of Occupiers' Changing Locational Criteria?

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Introduction

This paper addresses the role which user-demand has played in influencing the viability of large-scale suburban office development in Dublin, particularly at new suburban locations. It is based on a wider study of the changing geography of office development in the city since the mid-1990s and the relative influence of changing planning contexts, the operations of development interests and the changing locational criteria of users.

The most recent office boom in Dublin, from 1995 to 2000/01, was characterised by large-scale suburbanisation of office development, the traditional office core in Dublin 2 and 4 decreasing in relative importance as a development location throughout the 1990s. As Table 1 indicates, between 1990 and 1994, 22 per cent of the office space which was developed was built at suburban locations, while the central area accounted for approximately 78 per cent. After 1995, there was a major increase in development activity in the suburbs, their accounting for 66 per cent of development thereafter (CURS, TCD, Office Database, 1960 – 2001).

These figures illustrate the increased viability of peripheral office development during the latter part of the 1990s. This was partly a reflection of the relative ease with which development could be undertaken in suburban jurisdictions, in contrast to the planning restrictions prevailing in the central area, involving strict conservation policies, density and height restrictions (see Bertz, 2002). However, for the developer, profitability is underwritten by the existence of user demand. This paper examines the degree to which take-up at suburban locations may be attributed to the changing requirements and preferences of users.

Economic Growth and the Expansion of Demand

The Irish economy registered growth during the latter part of the 1990s. Per capita gross

Table 1. Location of Office Space Completed in Dublin: 1990-1994 and 1995-2001

	1990 - 1994 (%)	1995 - 2001 (%)
Inner city incentive areas	29	14
Other inner city areas	7	6
Dublin 2 & 4	42	14
Suburbs	20	54
Suburban incentive areas	2	12

domestic product, (GDP) which had stood at approximately 74 per cent of the EU average in 1990, rose to surpass the EU average by 2000. Rapid economic growth was reflected in expanding employment which, at the end of 2000, was approximately 40 per cent higher than in 1994 (Central Bank of Ireland, 2000). The decade was characterised by significant changes in the nature of employment, the number of persons employed in the services sector within the Dublin Region alone having expanded by 60,700 between April 1991 and 1996 (DKM Consultants, McHugh Consultants, 1997). By 1998, 466,700 persons were employed in this sector within the Greater Dublin Region (GDR), comprising 75.5 per cent of total employment there (McCabe, 2000). These trends fed fuelled the demand for office space in the region, the Information Technology/Communications sector together with Financial Services accounted for a high proportion of take-up during the late 1990s. For example, in 1998 these two sectors accounted for 43 per cent and 22 per cent of office take-up respectively, rising to 46 per cent and 25 per cent respectively in 2000 (Sherry FitzGerald, 1998, 1999, 2000).

The recent office boom was characterised by geographical diversification of demand within the central area and, most significantly, by a surge of user-demand at suburban locations outside long-established suburban office nodes such as Blackrock and Dun Laoghaire. Most significantly, take-up was strong to the south and west of the city and at the north-east inner-suburban East Point Business Park (Figure 1).

During 1995, office take-up was still concentrated within the central area (Dublin 1, 2, 4, 7, 8). Yet, by 2000, the majority of space taken up was accounted for by non-traditional suburban locations, particularly to the south and west of the city, while more established nodes at Dun Laoghaire and Blackrock comprised only a small proportion of take-up during the year (Figure 2).

Demand Criteria

An extensive literature has developed since the 1960s dealing with user-demand criteria relating to office location. The reasons for the concentration of office activities within the

Figure 1. Location of Office Space Taken Up in Dublin: 1995 - 2000

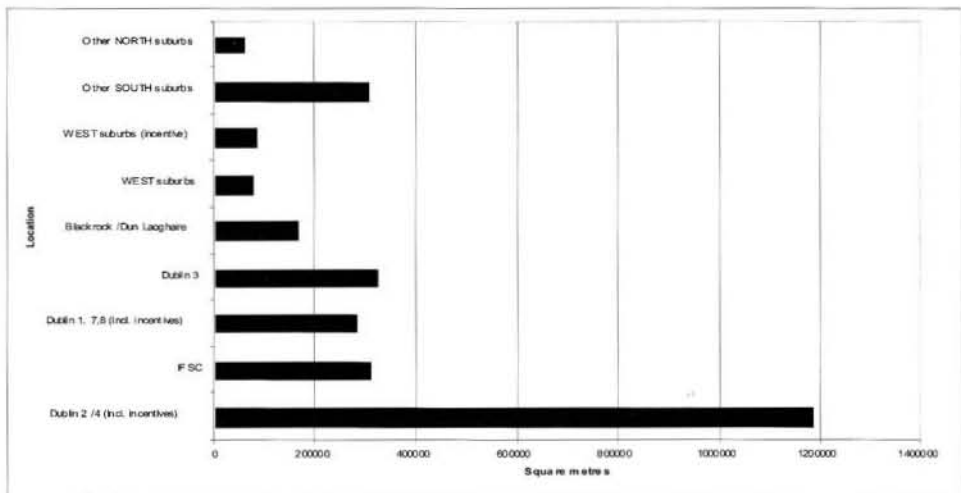
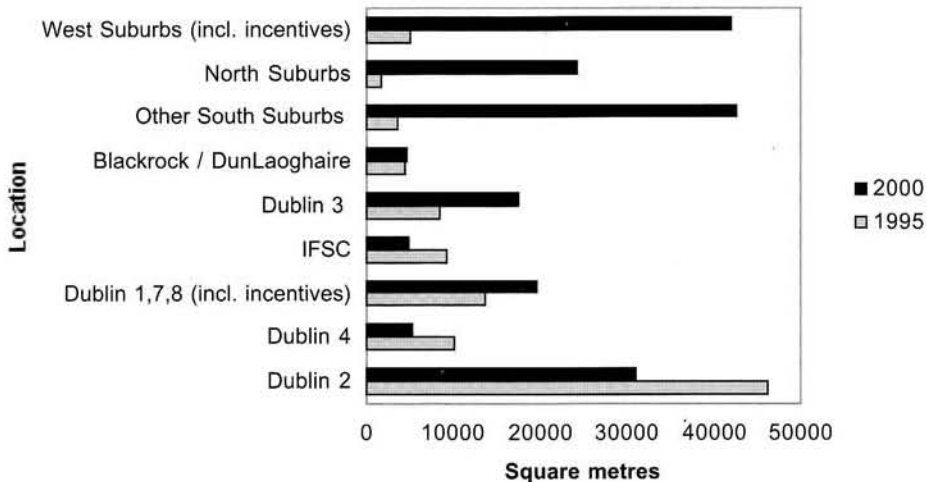


Figure 2. Location of Take-up of Office Space in Dublin in 1995 and 2000

central areas of cities constituted the focus of many British studies, while in the United States, Canada and Australia the emphasis lay largely on the factors underlying the large-scale suburbanisation of user-demand. The way in which the process of office suburbanisation was interpreted differed markedly, with some regarding this phenomenon as synonymous with the decline of the city centre (e.g Pascal, 1987; Kutay 1986) while others (e.g. Alexander, 1979; Lenon, 1987; Castells, 1996; Graham and Marvin, 1996) interpreted the process in less dramatic terms. Alexander (1979, 35) asserted that

'While dispersal of office activity within U.S. cities has proceeded rapidly over the past 20 – 30 years, it has not prevented office activity from continuing to expand in some central city areas, and it has certainly not led to the extinction of the concentration of office activity in the central city.'

Castells (1989) argued that 'It is this two-fold process of simultaneous centralisation and decentralisation, both elements associated with the same techno-economic dynamics, which explains the complexity of our analysis' (Castells, 1989, 151) while Graham and Marvin (1996) reiterated this by pointing out that 'Complex combinations of both decentralisation and centralisation are occurring simultaneously' (Graham and Marvin, 1996, 42).

The Role of Information in Office Location

The work of Bannon (1973) in relation to Dublin, Goddard (1973) with respect to central London, and Daniels's (1979) study in London, whose work drew on Swedish studies undertaken in the 1960s by researchers such as Tornqvist (1968), interpreted the tendency for concentration of service activities as the result of the necessity for physical proximity to facilitate communication required for conducting business. The central area was believed to generate business benefits which were largely absent at other locations.

In relation to offices in central London, Goddard (1973) classified the contact patterns of

office activities according to type, highlighting the differing purpose of contacts that were said to translate into varying locational requirements. He argued that the three broad contact types which he identified (i.e. orientation, planning and programmed activities) were associated with differing locational requirements and explained that

'Each of the different organisational processes associated with orientation, planning and programmed activities have quite different environmental demands. While orientation processes demand a very rich and diverse environment in terms of potential contact opportunities, this diversity is not so essential for the purposes of planning and programmed activities' (Goddard, 1973, 192).

However, others (e.g. Alexander, 1979; Daniels, 1985) argued that the emphasis on the explanatory power of businesses' communications requirements, reflected in the need for physical proximity and resulting in the concentration of service activities within the city centre, had been exaggerated. In his study of office location in Sydney, Alexander (1979) questioned the prime importance of communications links in determining the location of office activities and, drawing on Daniel's (1975, 58) work, asserted that

'... the communications patterns of an organisation cannot be used as an accurate predictor of actual locational behaviour. This is due to the fact that even if an activity is footloose in communications terms, it is not necessarily so in other terms (Daniels, 1975, 233). The significance of the communications factor should not be overemphasised.'

The Potential Impact of Telecommunications for Office Location

The potential impact of telecommunications on office location patterns has featured strongly in the literature (e.g. Goddard, 1973; Daniels, 1985; Kutay, 1986; Lloyd, 1990; Matthew, 1993; Michalak and Fairbairn, 1993; Sassen, 1995; Castells, 1996; Graham and Marvin, 1996; Ratcliffe and Stubbs, 1996 and Breathnach, 1999) and has been a point of contention. Prior to the development and widespread use of modern communications technologies, Goddard (1973) highlighted the increased potential of telecommunications to increase the feasibility of office suburbanisation. With regard to 'programmed' contacts he explained that

'because these contacts are predominantly by telephone they would not seriously be affected by decentralisation. Also, since programmed contacts do not form part of a communications chain (i.e. they are not closely related to previous or subsequent contact), a loss of individual connections through decentralisation would not be too serious' (Goddard, 1973, 197).

However, Alexander's (1979) examination of office re-location from central London failed to support the assumption that the strongest propensity for dispersal would be associated with office activities which were least dependent upon external contacts of an 'orientation' nature. These reservations supported the earlier findings of Goddard and Morris (1974, 25) who had found that:

'... apart from insurance, the most mobile activities are those theoretically least suited to dispersal... the nature of a business of a firm can be a very poor indicator of the opportunities for, or constraints upon, decentralisation.'

Goddard (1973, 197) also pointed to the limitations of telecommunications as effective substitutes for contacts which relied heavily on personal communication, explaining that:

'The importance for the large wide-ranging meeting for these processes [orientation] also implies that future telecommunications systems are likely to be ineffective. This is because telecommunications are likely to inhibit chance connections.'

Authors such as Castells (1989, 1996), Sassen (1995) and Graham and Marvin (1996) have viewed technological changes (e.g. telecommunications) as a potential force not only for decentralisation but also for concentration of office activities, while Lee and Schmidt-Marwede (1993, 498) referred to the centrifugal force which technology represented, arguing that 'the principal effect of improvements in communications has been to lead to centralization of financial activity by allowing centres to serve wider hinterlands'. A similar argument was advanced by Graham and Marvin (1996, 141) who, commenting on the centralising force represented by technology, stated that 'face-to-face activities here have not been made obsolete by new technology; rather, technology has extended the geographic reach of firms that transact business in these world capitals ... extending the operational boundaries of a city'. They went on to challenge the view that the availability of telecommunications would reduce the relative importance of location and stressed that 'telecommunications do not simply substitute or displace space – they redefine how space is perceived, used and controlled' (Graham and Marvin, 1996, 336).

In contrast, Kutay (1986) referred to the decreased importance of the city centre resulting from the diminished significance of traditional locational factors which had previously underwritten its importance, stating that it 'is continuing to lose its locational advantage and uniqueness within the metropolitan spatial structure. Technological changes continue to lower the necessity for concentration' (Kutay, 1986). However, explanations of suburbanisation which attributed prime importance to technological change were criticised by Breathnach (1999, 1) who argued that:

'While the restructuring of office work and the development of information technology have made the spatial separation of routine and non-routine office activities feasible, they do not in themselves explain the large-scale movement of the former from central-city locations.'

Similarly, Castells (1989, 142) challenged the importance placed on the impact of technological change on office location patterns, noting that:

'There is no direct effect of communications technologies on the location of offices and services. Their effects are mediated through trends in the evolution of service and information activities and through the changing organisational logic of corporations.'

Several authors (e.g. Lloyd, 1990; Matthew, 1993; Michalak and Fairbairn, 1993; Ratcliffe and Stubbs, 1996) have alluded to the manner in which users were becoming less locationally constrained as a result of communications technology. Lloyd (1990) stated that 'Geography has only an intermittent influence on the distribution of IT jobs; most of the old location

problems just do not apply' (Lloyd, 1990, 48), while Michalak and Fairbairn (1993, 4) opined that '... since the advent of advanced telecommunication networks, more 'footloose' locations are possible'. A similar view was put forward by Ratcliffe and Stubbs (1996, 407) who argued that 'Conventional concepts of location in the office market are rendered redundant by improvements to communications ... businesses are now much freer in their approach and inclined to be more supply oriented' while Matthew (1993, 303) explained that:

'improvements in the cost and efficiency of telecommunications have led to a significant relaxation in the need for closely linked offices to be near each other. A wide range of office activities, including large corporate head offices and highly specialized services, are now locating in suburban office centres, where their information needs can still, apparently, be satisfied.'

Business Sector and Organisational Status of Company

Several examinations of office suburbanisation (e.g. Goddard, 1973; Alexander, 1979; Michalak and Fairbairn, 1993; Matthew, 1993) have noted the varying propensity of companies to suburbanise according to their business-sector affiliation and organisational status, these being associated with varying communications requirements. In his study of central London in the early 1970s, Goddard (1973, 212) concluded that

'Some publishers, advertising agencies, construction firms and consulting engineers have demonstrated an ability to move out of well-established office districts in the centre and others have dispersed from Central London as a whole (Goddard, 1967) ... On the evidence of the communication survey, over 80 % of all contacts in Central London are of a type that could be readily carried on outside the centre.'

In examining the office sector in Edmonton, Alberta, Michalak and Fairbairn (1993) found that different business sectors were associated with different locational requirements:

'There are large differences in the intra-urban location of producer service firms classified by sub-sectors. The CBD area attracts mostly legal, employment, and management service firms... In contrast, only 10.9 per cent of engineering and architectural service firms are located in the CBD. The majority of such firms prefer office parks and inner-city locations. Computer service firms are distributed more uniformly throughout Edmonton. The most preferred locations, however, are suburban office parks with 35.3 per cent of all computer service firms ... It is clear ... that the intra-urban location of producer service firms is closely related to the type of service offered by a firm' (Michalak and Fairbairn, 1993, 9).

Huang (1989) found similar variations in Toronto, noting that:

'The clearest differences were in economic sector mix: technical services, insurance, mining and construction establishments were overrepresented in the suburban office nodes; while banking, finance, law, management consulting, personnel, and government offices were overrepresented in the core, particularly the financial district; with real estate, public relations, architectural, and communications offices being overrepresented in the core frame ... while back offices were a much smaller proportion of suburban office establishments and jobs than anticipated' (Huang, 1989).

However, she concluded that

'no significant polarization of office employment by occupation or gender between the central city and suburbs has developed in Toronto. Neither have the suburbs become the preferred location of offices as postulated by Muller et al. The reality ... is one of fundamental similarity between central city and suburban offices.'

Michalak and Fairbairn (1993, 2) also pointed to the propensity of producer service firms to undertake suburbanisation, noting that 'those moving out, among them exporters of producer services, are less likely to require the face-to-face contacts a CBD location permits'.

The differential tendency for dispersal according to organisational status was also noted by Alexander (1979), who commented that 'the decentralisation of sections of banking and insurance firms heavily involved in clerical activity or in data processing has been common for some time ... But head offices in the finance sector remain highly centralized' (Alexander, 1979, 33-34). This was supported by Matthew's (1993) study in Toronto which found that 'the suburban centres have been unable to attract the head offices of multi-site corporations to the extent that the CBD has' (Matthew, 1993, 299). Similarly, Michalak and Fairbairn (1993, 8) asserted that

'The organizational status of a firm is closely related to its market area. It has been demonstrated that head offices and independent firms have substantial non-local markets more often than do branch offices. Thus, the organizational status of a firm determines, to a certain degree, its location in an urban area and hence the premises it occupies.'

However, (Alexander, 1979, 34) seems to contradict his earlier assertion:

'differential growth of suburban and central employment levels was most marked among managerial occupations, which actually showed a decline in the central city ... this again goes against the widely accepted notion that top office activities require a central location.'

Factors in Office Suburbanisation

Apart from communications-related issues, a multiplicity of potentially important factors in office location have been recognised. A number of authors (e.g. Alexander, 1979; Daniels, 1982; Code, 1983; Matthew, 1993; Michalak and Fairbairn, 1993; Ratcliffe and Stubbs, 1996; MacLaran and Floyd, 1997) have attempted to ascertain and evaluate the relative importance of a variety of factors (e.g. geographical, economic and building-related) in the locational decision-making of companies as a way of explaining office suburbanisation. Alexander (1979, 25) argued that:

'While these [face-to-face] contacts may be regarded by managements as a sufficient reason for the maintenance of a central location, there are many other factors at work encouraging centralization, including real needs such as staffing and office space but also more subjective and personal ones such as prestige and tradition... There would appear to be greater scope for office dispersal than is suggested by the conventional wisdom of office location analysis.'

This was supported by Michalak and Fairbairn (1993, 4) who pointed out that

'The importance of face-to-face links seems to have been exaggerated. There are many other factors at work encouraging either concentration or decentralization, including the 'hard' economic factors such as labour, wages and floor space and the 'softer', more subjective and personal factors, such as prestige, tradition, or deliberate public policy aimed at dispersing economic activities.'

i) Geographical Factors

Matthew (1993), Ratcliffe and Stubbs (1996) and MacLaran and Floyd (1997) have highlighted the importance of geographical factors (e.g. accessibility, staff issues, transportation, prestige) in office suburbanisation. In his examination of offices located in Toronto's suburban centres, Matthew (1993, 301) noted the prime importance of aspects relating to accessibility issues and explained that

'a suburban office centre's attraction depended on various aspects of accessibility: good highway access (73 per cent of the respondents), public transit service (29 per cent), access to clients (8 per cent), convenient parking (18 per cent), and access to various other destinations, such as the homes of executives, the CBD and the airport ... it was clear that the critical factor was highway access ... Generally, it is only when those access needs can be met by more than one suburban centre that other considerations influence the choice of location to any significant degree.'

Ratcliffe and Stubbs (1996, 405) concluded that '... location remains the single most important factor to occupiers out of the four major determinants of location, building design, cost of occupation and lease terms', while in their study of office location in the Dublin region, MacLaran and Floyd (1997, 12) found that:

'Accessibility for clients, staff, senior managers and accessibility to business associates remain factors of major significance in locational choice and are criteria which will undoubtedly restrict the degree to which office establishments will feel able to undertake suburbanisation.'

However, staff issues were found to be rather unimportant in the locational decision-making of office occupiers in studies of London and Toronto carried out respectively by Daniels (1982) and Matthew (1993). In examining the reasons cited by companies in central London which had considered decentralisation during the 1960s and 1970s, Daniels (1982) found that staff issues were not cited as being of particular importance and explained this finding by virtue of the fact that individual workers bore the main costs:

'Staff recruitment and welfare, and transport congestion are mentioned less frequently than might be expected from earlier comments; to some degree these only impose partial costs upon individual firms because they are partially borne by all the workers who choose to travel to central-area office jobs or change jobs frequently in order to improve their salaries or fringe benefits' (Daniels, 1982, 68).

The low degree of importance attributed to staff issues was again highlighted in the findings of Matthew (1993, 302) who established that:

'Only 4 per cent of them [respondents] agreed that access to an appropriate labour pool had been a very important consideration in their location decisions, while 68 per cent said that it had been of minimal importance or ignored completely.'

The importance of more subjective non-economic factors, such as prestige, in companies' locational decision-making was pointed to by Michalak and Fairbairn (1993, 8): 'The CBD location will be preferred by firms for which a corporate image and prestige are important', quoting Quante's (1976) findings, who had considered that

'prestige of the location was an important locational factor for firms located in the CBD. By contrast, all firms located outside the CBD area ranked prestige of location very low. This finding supports the earlier observation of the importance of extra-economic considerations, such as prestige and tradition, to the firms located in the CBD.'

ii) Building-related Factors

It was noteworthy that few studies attributed a significant degree of importance to building size or specification as criteria of locational choice. However, several surveys found considerable importance ascribed to the availability of parking for suburban occupiers, especially compared to the significance of public transport connections. In his study of offices in Sydney, Alexander (1979, 53-4) found that

'Generally ... access to public transport is not rated as particularly important by suburban offices in Sydney – a higher proportion are concerned with parking availability ... The availability of parking space has been one of the major attractions of suburban office parks and free-standing office developments in U.S. cities.'

Similarly, MacLaran and Floyd (1997) found that over 60 per cent of respondents deemed the availability of car-parking to comprise a 'very' or 'extremely important' factor in the evaluation of alternative office locations.

iii) Economic Factors

While Alexander (1979), Code (1983) and Daniels (1985) have offered explanations of office suburbanisation in terms of the high accommodation costs associated with central areas, in a context of rising accommodation opportunities at suburban sites, they ultimately questioned the impact of accommodation costs as an explanatory variable. The tendency to over-exaggerate the importance of accommodation costs as an explanation of companies' relocation decisions was alluded to by Alexander (1979). He found that although rent was ranked third in the study of office re-location in Sydney, it comprised a relatively minor cost to a company, quoting Rhodes and Kahn (1971, 28) who stated that:

'But the importance of the rent factor in the office relocation process should not be exaggerated. Rents usually account for no more than 20 per cent of an office firm's costs – labour is the dominant cost.'

The importance of accommodation costs as a factor driving suburbanisation was also questioned by Code (1983, 1379) in relation to his study of office location in Toronto:

'Among occupants of core space, the frequency with which costs were perceived as being greater than the benefits of the central location was not markedly increasing during this period of rapid core-expansion in the early to mid 1970s ... as the opportunities to occupy suburban space have increased, (the rate of expansion and vacancy rates have been consistently higher in the suburbs throughout this period) there has been a countervailing decrease in the willingness of occupants of the center to move to the suburbs.'

He recognised the poor evidence for the importance of the divergence in accommodation costs between central city and suburban locations as a factor contributing to office suburbanisation and questioned the value of reducing locational decision-making to a trade-off between accommodation costs and the maintenance of contacts by physical proximity. With regard to the Toronto office market he pointed out that

'... a rent gradient justifying a core-to-suburban move for these most mobile firms has been attained, supported by vacancy rates of less than 2% in the core and between 8% and 17% in the suburbs. This apparent resistance to the suburban move, among even the theoretically most mobile functions, suggests that the balance is tipped in favour of locational conservatism by variables other than contact frequencies' (Code, 1983, 1379).

Having thus briefly reviewed the criteria cited as significant in the location of office establishments, this paper turns to an examination of the suburbanisation of office take-up in Dublin and attempts to determine whether this has been largely a reflection of changing demand criteria on the part of occupiers.

Methodology

An analysis of the location of office take-up during the period 1995 to 2000 was undertaken using data from the Office Database of the Centre for Urban and Regional Studies, Trinity College, Dublin. This provided geographically disaggregated information on every transaction involving the take-up of over 100 sq. m. of space. This was supplemented by a postal survey of office occupiers at selected city-centre and suburban locations, seeking profile information from companies and evaluating the relative significance of a range of criteria in the locational decision-making process. The survey of office occupiers was conducted in 2001 in the central area (Dublin 1, 2, 4, 7 and 8), established suburban locations (Blackrock, Dun Laoghaire, Clonskeagh) as well as new suburban locations (Sandyford /Leopardstown, Citywest, Park West and East Point). It primarily addressed office establishments which had taken up space in the period 1995-2001. The well-established suburban office nodes at Blackrock, Dun Laoghaire and Clonskeagh were chosen to serve as a comparison with the newer suburban nodes such as Citywest, Park West, Sandyford -Leopardstown and East Point. These information sources were supplemented by in-depth direct interviews with key individuals in both the public and private sectors involved in the planning, development and marketing of office space in Dublin. Important insights into the nature of user-demand for office space were elicited from structured interviews with key figures in the offices departments of Dublin's

Table 2. Categories of Locational Factors

Economic	Building-related	Geographical	Availability	Operations-related	Other
rent / price, financial incentives, tax reasons	size /specification, car parking, telecommunications, lease terms	Accessibility to /with : staff, clients, business associates, public transportation, motorway, airport proximity to previous location, traffic congestion, avoid city centre, environment /amenities	availability / lack of availability of suitable property	consolidation of business operations, transfer of lease from another company	family reasons, health reasons, locational decisions made by parent company, IDA assistance, required space quickly

seven leading real estate agencies (Hamilton Osborne King, Lisney, Sherry FitzGerald, Palmer McCormack, Jones Lang LaSalle, Insignia Gunne and Lambert Smith Hampton). These informants are cited as Interviews EA 1 to 7. Interviews with sixteen development interests involved in the office sector during the 1990s were also undertaken and are cited as Interviews D1 to 16. In addition, eleven interviews were conducted with key figures in the four Dublin Local Authorities, relevant public agencies and private planning consultancies, cited as Interviews P1 to 11.

The Emergence of a New Type of User-Demand

Several estate agents and a number of developers (Interviews: EA2, EA3, EA4, EA5, D3, D4, D7, D10) were of the opinion that a highly significant factor impacting on the large-scale take-up of office space at new suburban locations was the emergence of a new type of user-demand in the Dublin office market during the latter part of the 1990s. They referred to the way in which offices in Dublin served a changing and increasingly diverse market, a greater role being played by international companies associated with new types of office requirement. With regard to the demand for suburban office space, one developer pointed out that, from the mid 1990s onwards, this was fuelled by a new type of tenant; highly mobile new industries of foreign nationality which were not locationally specific in their office demands (Interview D12). The emergence of this new type of office activity, associated with new suburban locations in particular, was also alluded to by several of the estate agents, one of whom explained that

'For a long period the state in one guise or another accounted for approximately 50 per cent of the market. The balance of that market was then largely made up from the banking and insurance sector and professional organisations ... so it was still very much indigenous stuff. It's really only from the mid-1990s that we have seen this growth in the economy, fuelled largely by the onset of multinational companies coming into Ireland. You had the call centre boom, the software boom, the technology boom generally... So, in one sense, the growth of suburban development was a perception that no land was being developed in the city centre and then it was also a response to this new industry' (Interview EA 5).

The significance of the Information Technology/Communications sector in shaping user demand for office space, particularly at peripheral locations, at the end of the 1990s and into the twenty-first century, was referred to by one real estate agency Director who noted that

'If you take the periphery, I would say you'll find that that figure is up at 80 or 90 per cent, which is very high. In the city centre it's quite low, it might be around 15 per cent. They have been the driving force behind, I would suspect, 70 per cent of take-up over the last four-year period' (Interview EA3).

Another estate agent pointed out that 'the call centres were one of the first things that switched the location of development, with developments such as East Point' (Interview: EA5).

Several developers and estate agents (Interviews: EA5, EA7, D4, D16) held the view that many office occupiers were less constrained by location because of a diminished requirement for physical proximity and, consequently, reduced need for a central-area location. The extent to which the advent of this new type of user-demand was synonymous with the diminished importance of locational factors traditionally associated with the central area (e.g. accessibility to clients, customers, business associates, support services, informal business networks, and opportunities for face-to-face contact) will be explored.

Profile of Office Occupiers at Central Area and Suburban Locations

The survey of office occupiers provided useful information on the profile of companies at different locations. In terms of business sector affiliation, the high concentration of financial services at central area locations was notable. In contrast, established suburban sites were associated with a high proportion of professional services (e.g. accounting, architecture, legal) while new suburban sites were particularly associated with the computer software /IT sector (Table 3).

Although Irish companies comprised the majority of respondents at both central area and suburban locations, the city centre had a higher proportion of foreign companies compared to suburban sites. The central area contained a higher proportion of large companies in terms of floor space and number of employees (Table 4).

In terms of their organisational status, the single most important category at central area and suburban locations were head office functions. However, in keeping with the higher incidence of foreign companies, branch offices were more strongly represented within the central area, while there was a greater concentration of sole establishments in the suburbs (Table 4).

Table 3. Business Sector Affiliation of Office Occupiers

Sector	Central Area (%)	Established Suburban (%)	New Suburban (%)
Computer software / IT	7	13	22
Telecommunications /communications / electronics	8	10	9
Property / construction	2	3	6
Market research /sales /advertising	4	12	5
R & D / design	0	0	10
Management consulting / PR	11	3	0
Financial services	47	8	6
Professional services	2	35	10
Telemarketing / call centre	0	3	6
>1 affiliation	11	0	9
Other	8	13	17

Table 4. Profile of Office Occupiers

	Central Area (%)	Established Suburban (%)	New Suburban (%)
Floor space (sq m)			
< or = 100	4	14	14
101 – 1,000	36	50	61
1,001 – 5,000	40	32	19
5,001 – 10,000	14	4	4
10,001 – 20,000	3	0	2
> or = 50,001	3	0	0
No. of Company Employees			
1-10	11	9	26
11-30	9	29	22
31-50	15	12	14
51-100	27	26	16
101-250	16	6	10
>251	22	18	12
Organisational Status			
Head office	46	49	52
Branch office	42	23	15
Sole establishment	6	22	28
Head office & independent firm	0	3	2
Head and branch office	0	3	0
Other	6	0	3

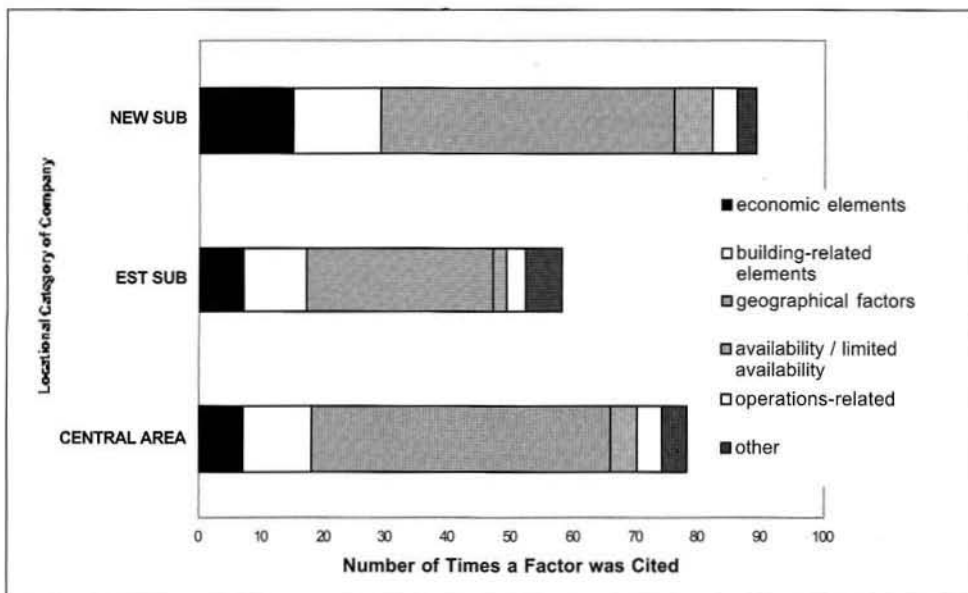
Factors in Occupiers' Locational Choice

The extent to which the high level of suburban take-up, particularly at new suburban sites, was associated with variations in the level of importance attributed to certain factors in occupiers' locational decision-making, was investigated by ascertaining the degree of importance attributed to a range of geographical, building-related and economic factors in occupiers' choice of offices. Perhaps unsurprisingly, at each of the three locations, geographical factors proved most significant. This was evident from an examination of the most frequently cited reasons in occupiers' selection of their current location and in the ranking of factors in locational decision-making (Figure 3 and Table 5). Factors relating to staff issues and accessibility were most frequently alluded to, with business-related accessibility/proximity (e.g. client access, facilitation of face-to-face contact, access to support services and informal networking between staff) referred to much less frequently.

The prime importance of geographical factors for occupiers at central area as well as suburban locations was again highlighted in relation to the issues cited by respondents as having increased in importance since the take-up of space at their current location (Table 6 and Figure 4). Traffic congestion, public transport and car parking were the most frequently cited factors whose importance had increased since the take-up of space by respondents

Table 5. Most Important Factor (1st rank) in Occupiers' Choice of Current Location

Factors	Central Area (%)	Established Suburban (%)	New Suburban (%)
Quality of environment	0	0	3
Locational factors	63	56	49
Building-related	15	16	24
Economic elements	22	28	24

Figure 3. Reasons for Choice of Current Offices

across the three location samples. Occupiers at new suburban sites proved to be particularly affected by worsening traffic congestion, with this factor having been cited nineteen times by these respondents compared to on only five and nine occasions by respondents at established suburban and central area sites respectively. It was noteworthy that rent was cited only once by central area respondents as having increased in importance, indicating that central area companies did not appear to be particularly sensitive to increases in the cost of accommodation.

Table 7 presents a more detailed examination of the importance of individual locational, building-related and economic factors in occupiers' choice of current premises at central area, established and new suburban locations.

While staff issues, staff accessibility, telecommunications infrastructure, building size/specification and the cost/rental value of accommodation were very important for occupiers at central as well as suburban locations, the most significant differences were with respect to the importance of public transport, the availability of car parking and prestige. The availability of public transport was appreciably more important for central-area occupiers compared to suburban respondents, particularly at new suburban sites where a mere 15 per cent of occupiers considering this factor to be 'very important' compared to 45 per cent within the central

Table 6. Factors that Increased in Importance Since Taking up Premises (number of times a factor was cited)

Factors	Central Area	Established Suburban	New Suburban
Geographical	16	14	21
Economic	0	1	0
Building-related	5	8	6

Figure 4. Factors that Increased in Importance Since Taking up Premises

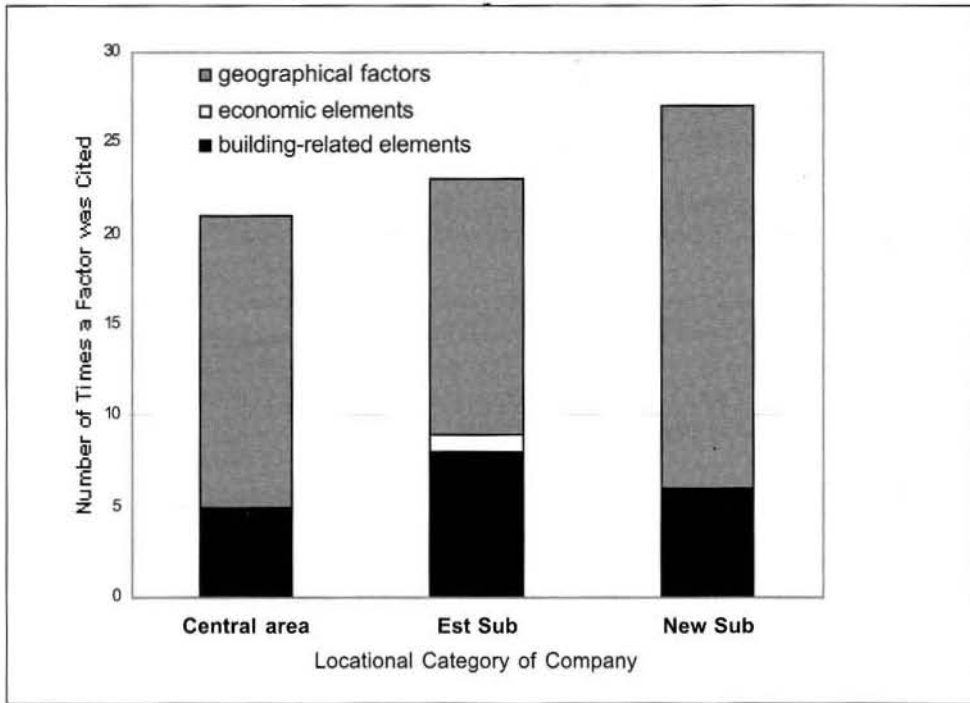


Table 7. The Importance of Geographical, Building-related and Economic Factors. (percentage of respondents citing factors to be 'very important')

Factors	Central Area (%)	Established Suburban (%)	New Suburban (%)
Staff issues	65	48	53
Telecommunications	63	52	60
Building size /specification	61	45	53
Staff access	54	69	49
Building cost /rent	48	45	49
Public transport	45	36	15
Flexible lease terms	44	14	26
Prestige	43	12	18
Client access	39	27	31
Physical expansion	36	38	17
Car parking	35	49	59
Face-to-face contact	30	30	15
City centre access	30	6	3
Access business associates	24	18	22
Senior staff access	23	22	28
Access support services	22	18	7
Financial incentives	21	5	13
Informal networking	15	22	11
Amenities	10	17	4
Airport access	8	0	9
Access informal business networks	3	10	3
Access C-Ring motorway	0	3	14

area. In contrast, a considerably higher percentage of suburban respondents, notably at new suburban locations, cited the availability of car parking to be a 'very important' factor, with 59 per cent indicating this to be 'very important' compared to only 35 per cent for central area respondents. However, Spearman's Rank Correlation Coefficient revealed that there was no significant difference in the ordering of the importance of factors in occupiers' locational decision-making according to location.

The key importance of staff issues, particularly staff accessibility, in companies' locational decision-making was alluded to by one estate agent who asserted that

'The main consideration is accessibility for staff. That is number one by a long shot. That far outweighs any other consideration. It's become more pronounced because with the job-market the way it is and difficulty in securing staff [early 2001]. It was less a consideration in the past because the stock of office buildings was less geographically spread' (Interview EA 6).

Another agent also highlighted the importance of staff issues and stated that

'The biggest issue I would think in terms of those kind of locational decisions would all be revolving around personnel and staff – is this the location where I'll be able to get the kind of people I need? What are the transportation facilities to get the people to work?' (Interview EA 5).

Despite the availability of telecommunications infrastructure was accorded a high degree of importance by central-area as well as suburban occupiers (established and new), the influence of this factor on occupiers' choice of location was deemed to be minimal by a number of estate agents who pointed out that the availability of telecommunications infrastructure was now wide-spread throughout Dublin, and unless a very large bandwidth was required, companies were not constrained by this factor in their locational decision-making (Interview EA 3).

Another agent commented on the changing space requirements of office users, and had some reservations regarding the explanatory power of this factor regarding the shift of office take-up to suburban locations, remarked that:

'A lot of the service centres, the call centres, have changed the type of building that's required, in the sense that they need bigger floor-plates, high visibility, less fragmentation, they don't want to be moving around floors all the time. So that has brought about a need for moving from a traditional floor-plate in Dublin of maybe 7 or 8,000 sq ft to plates of 15 or 20,000 sq ft. It's easier to provide that kind of building on a free site. That having been said, I don't think the market is as sophisticated as we would like to believe at times. I wouldn't attempt to say to you that suburban development really started because people were seen to require bigger floor-plates' (Interview EA 5).

With regard to the role of accommodation cost in influencing the shift of take-up to the periphery, another real estate agent noted that

'... the other thing that probably is an issue [apart from planning] is this sort of large demand situation that arose from effectively American corporates or IT corporates who were probably reasonably cost-conscious' (Interview EA 3).

However, the postal survey evidence did not suggest that the cost of accommodation was appreciably more important for suburban companies compared to central-area occupiers.

One estate agent and several developers (Interviews EA3, D13, D14, D15) highlighted the importance of the availability of car parking in the locational decision-making of respondents at new suburban locations, the real-estate agent explaining that

'Parking now is an issue. People do go to locations that they otherwise would not go to, because of the availability of parking. Certain companies are very parking-oriented, and, for instance, if you want x level of cars, you have to go to a peripheral location like Park West' (Interview EA 3).

The greatest disparities in the rank ordering of factors between central-area and suburban occupiers were in relation to flexible lease terms, prestige, car parking, access to the city centre, access to the M50 semi-orbital motorway, accessibility for senior staff and opportunities for informal networking between staff. The difference with regard to the importance of lease terms and prestige was most marked for respondents at established suburban sites, for whom these issues were of considerably less importance, while respondents at new suburban sites ranked prestige considerably higher than occupiers at established suburban sites.

Car parking was deemed significantly more important for suburban occupiers, particularly those at new suburban sites, while city centre access was noticeably less significant for suburban respondents. Surprisingly, informal networking and access to business associates were actually accorded a substantially higher ranking by respondents at established and new suburban sites respectively compared to those within the central area. Occupiers at new suburban sites attributed a far higher ranking to access to the C-Ring motorway compared to both central area and new suburban respondents, while accessibility for senior management was accorded a considerably higher ranking by occupiers at new suburban sites than by respondents at either central or established suburban sites.

The frequently-cited reason for the surge of office take-up at suburban locations as being the result of the lower degree of importance of factors traditionally associated with a central area location (e.g. accessibility to clients, informal business networks and opportunities for face-to-face contact) was borne out for suburban companies only to a degree by the survey results. While generally these factors were not associated with a marked degree of difference, the most notable divergence concerned the degree of importance associated with accessibility to the city centre, with 30 per cent, 6 per cent and 3 per cent of occupiers at central-area, established and new suburban locations respectively citing this factor to be 'very important'. The difference in the importance of face-to-face contact, although less pronounced, was also noteworthy, with 30 per cent of central-area occupiers citing this factor as 'very important' compared to 15 per cent at new suburban sites.

With regard to the seemingly low level of importance of traditional locational factors associated with suburban occupiers, one real estate agent commented that

'The suburban market is very dependent on footloose organisations who don't have a need to cluster or who don't have a requirement for interaction with the general public, largely made up of technology-based companies' (Interview EA 5).

However, it was interesting to note that the survey results revealed that a number of these traditional factors were actually attributed a higher ranking by occupiers at established and new suburban locations compared to the central area. For example, in contrast to central-area occupiers, opportunities for informal networking between staff were accorded a far higher ranking by respondents at the established suburban locations, while accessibility to business associates and opportunities for face-to-face contact were ascribed a somewhat higher ranking by respondents both at new suburban and established suburban sites. The overall low degree of importance which central area respondents themselves attached to factors traditionally associated with a city centre location, was perhaps the most surprising finding.

Conclusions

The differential importance of factors in the locational decision-making of central area and suburban occupiers did not appear to explain the large-scale take-up of space by the latter. The survey findings contradicted a number of aspects of the office location literature and, to some degree, the assertions of the estate agents and developers. While the latter correctly stressed the importance of staff issues/access in occupiers' locational decision-making (which coincided with a tight labour market prevailing during the late 1990s), the importance of this factor has been underestimated in the literature. The significance of building-related factors such as size and specification were appropriately highlighted by estate agents and developers, whereas the literature also appeared to ignore these issues. The degree of importance accorded to accommodation costs did not differentiate suburban from central area occupiers, a finding which is supportive of the research reviewed earlier. However, the view taken by estate agents and developers with respect to this factor varied, a number of interviewees overrating the significance of the cost variable while others alluded to the relatively minor role which it had played.

However, occupiers at central and suburban locations, particularly those at new suburban sites did differ in certain respects. Public transport was a significant differentiating factor between central and suburban occupiers, particularly those at new suburban sites, with this factor being noticeably more important for central-area respondents. This was also highlighted in the literature and accurately assessed by estate agents and developers. Similarly, the considerably higher level of importance accorded to car parking by suburban occupiers, particularly at new suburban sites, coincided with the literature as well as the interviews. The survey revealed that motorway access was an important draw for occupiers at new suburban sites, although not for established suburban occupiers, the literature and views of estate agents and developers supporting these findings. Compared to suburban establishments, the noticeably greater importance which central-city occupiers accorded to prestige was also in accordance with the literature and the observations of estate agents and developers. The survey results thus indicated that the main differences in the locational decision-making of occupiers at central and suburban locations related closely to transportation issues. Hence, interpretations of office suburbanisation which focus heavily on changing user requirements in locational decision-making are likely to overstate the role of demand.

It is therefore evident that a full understanding of the shifting geography of office take-up also requires an analysis of the factors which underlie the changing geography of the supply of office space, with respect both to the driving-forces underlying office property development and to the evolving planning context within which such development takes place.

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