

# **FACTORS INFLUENCING OFFICE BUILDING OCCUPATION DECISION BY TENANTS IN KUALA LUMPUR CITY CENTRE – A DELPHI STUDY**

**Yasmin Mohd Adnan, Md Nasir Daud**

Centre for Studies of Urban and Regional Real Estate (SURE)  
Faculty of Built Environment, University of Malaya, Kuala Lumpur  
E-mail : yasmin\_alambina@um.edu.my

## **Abstract**

Only a limited amount of research has been reported on factors influencing office building occupation decision among tenants within the centre of Kuala Lumpur. In this paper, a comprehensive set of factors that may influence occupation decisions by tenants in office buildings in Kuala Lumpur is first identified through the search of existing literature. Results are then presented of a Delphi study that investigates the views of the panel of experts who had dealt with office building tenants in Kuala Lumpur in relation to factors influencing occupation decisions. The top five important factors identified by the panel are rental rate, security and access control, responsible management and maintenance team, car park provision/accessibility, and building image/identity. With the given responses, the results will then be used in the study to determine the relative importance of the factors and sub-factors across the different categories of office building tenants in Kuala Lumpur.

Keywords: Delphi method, Experts' Panel, Office Occupation, Tenants

## **Introduction**

In achieving the objective of full occupancy with quality tenants, it would be useful for the stakeholders of office buildings comprising building owners, investors, marketing agents in Kuala Lumpur to be able to identify the factors influencing office space decision among tenants. This would in turn assist towards the achievement of the specific objectives of these stakeholders either through the maximisation of the returns through a stream of income as well as the reduction

of the time spent in search of replacement tenants upon vacancy. It is especially a challenge to make the assessment of the specific needs of the tenants for office buildings in the centre of Kuala Lumpur - an area that has the most concentrated supply of office space - since there has been a trend of decentralisation to the suburban area of Kuala Lumpur in recent years (A E Ahmad, Z M Isa, 2008).

One of the goals mentioned in the Kuala Lumpur Draft Structure Plan 2020 is to enhance the role of Kuala Lumpur as an international commercial and

financial centre in line with the aspiration to make Kuala Lumpur a world class city,. However, its development strategy for the city centre is to have a moderate growth in order not to exacerbate the oversupply of commercial space in the city. The motivations for striving towards a world class status for major cities in the region are many including national pride and the fact that a world class city is seen as an answer to the critical problem of making a successful transition from low wage assembly platforms to technical advanced production and high order corporate service centre (Douglass, 2000).

Drawing from the above vision of turning Kuala Lumpur into a world class city, there are concerns highlighted in the Kuala Lumpur Draft Structure Plan 2020 on the commercial development. One of the concerns is the over-concentration of office buildings in the city centre - especially of older buildings including those vacated by the relocation of government offices to Putra Jaya (the new government administrative centre) - which are deficient in basic information communication technology (ICT) facilities (Draft Structure Plan Kuala Lumpur, 2020).

In spite of this concern, it has been generally noted that in most cities in the world, the central business district (CBD), or the city centre, is referred to as the heart of the city where there is a concentration of firms and office employment. It can often be regarded as the engine of city growth which can filter its impact on other parts of the city. The CBD is also often the focal point of a city and its population where a high concentration and diverse range of high value activities are found.

The aim of the study is to promote the achievement of the above vision by identifying the factors considered important by the major firms and organisations in attracting and retaining them in Kuala Lumpur, specifically in the city centre.

In this paper, a comprehensive set of factors and sub-factors that may influence office space occupation decision were first identified from the literature. Then, a Delphi procedure was employed to elicit expert knowledge in identifying the important factors and sub-factors in Kuala Lumpur. A panel of experts comprising property consultants and property/leasing managers of top quality office buildings participated in the study. The result was then to be used in the determination of the relative importance of the factors and sub-factors across the different categories of office buildings' tenants in Kuala Lumpur city centre. These tenants were to be selected from top quality office buildings with grades (Premium, A and B) identified from an earlier study to classify office buildings in Malaysia (Yasmin *et al*, 2009).

### **Office Market in Kuala Lumpur**

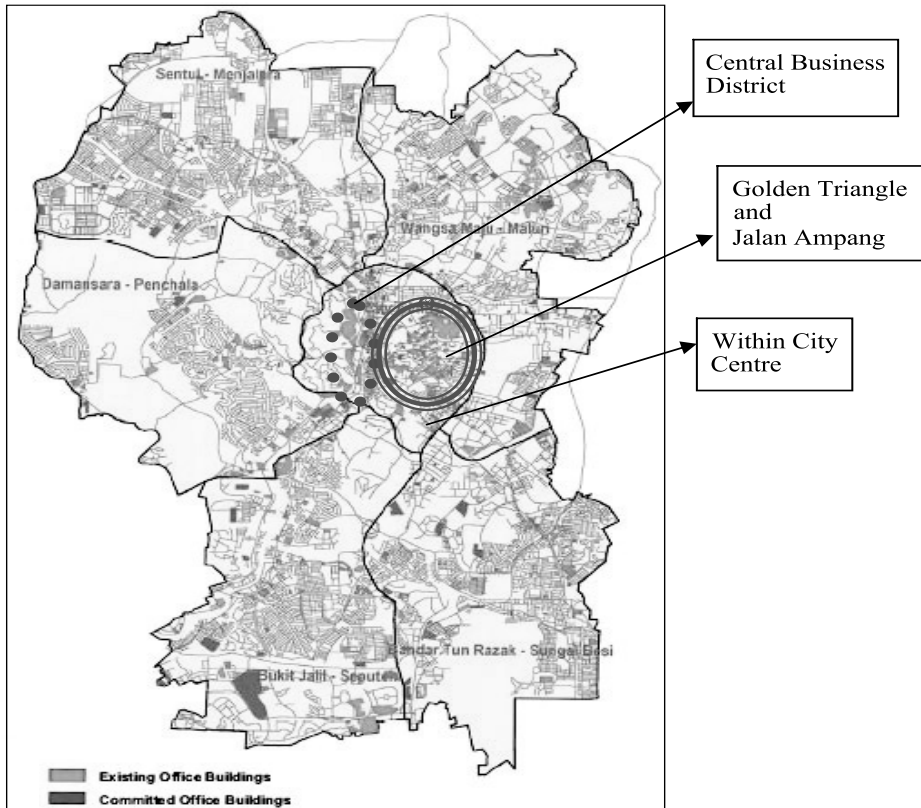
There has been a tremendous transformation of the Kuala Lumpur city centre since it first started as the centre of trade and later to become the capital city. Starting out as a tin mine settlement in 1867, Kuala Lumpur has progressed to attain city status in 1972 with an area of 92 square kilometres (City Hall of Kuala Lumpur, 1991). Since the 1960s and the 1970s, Kuala Lumpur started to

portray its position as a centre of trade and business. As the country progresses and moves past 50 years of independence, the initial central area of business activities of Kuala Lumpur, located between the two rivers of Klang and Gombak, has undergone tremendous changes. The manifestation of its physical function as a centre of business and office location activities is seen in the emergence of the Golden Triangle area (the area bounded by Jalan Ampang, Jalan Sultan Ismail and Jalan Bukit Bintang) which is built upon with international hotels and office and commercial blocks. At the same time, the

previous Central Business District (CBD) of Kuala Lumpur that used to be the traditional city centre, remains as the business and trade area with colonial economic features (Morshidi, 2002).

In most large cities, the central business district is such area as is said to be dominated by a limited number of competitors in the urban system, and the dominant land uses are associated typically with major banks, corporate office buildings, department stores, theatres, and other leading business, commercial, or entertainment uses (Kleinberg, 1995). Thus, CBD is easily distinguishable by its centrality, easy

**Figure 1:** Distribution of Office Buildings by Status, 2000



(source: Draft Structure Plan 2020)

accessibility and clustering of up market commercial organisations and tertiary employment. Information is vastly collected, processed and disseminated in this area. Thus CBD is a highly dynamic place that is normally associated with fast pace of life (Tang, Yeung, 1999).

In Malaysia, the Kuala Lumpur city centre has taken on different definitions in the hands of different stakeholders. The City Hall of Kuala Lumpur has defined the area as encompassing the central business location covering an area of 18,125,660.4 sq metres (see Figure 1). The property professionals, on the other hand, have varied definitions. The National Property Information Centre (NAPIC), Department of Valuation and Property Services, Ministry of Finance, Malaysia has identified the office buildings location in Kuala Lumpur as: Central Business District (CBD), Jalan Ampang (JA), Golden Triangle (GT), Within City Centre (WCC) and Suburban (SU) area. The Central Business District (CBD), identified as the older part of Kuala Lumpur city, was gazetted in accordance with the Comprehensive Plan No 1039 in 1970. The office buildings located within the area are mainly built before 1980s although some buildings have undergone refurbishments.

The definition of Kuala Lumpur city centre has now changed in line with the government aspiration of the city as a world class city. The centre which was formerly referred to as CBD now includes areas bounded within the Golden Triangle, Jalan Ampang and Within City Centre (WCC). For this study, the definition by City Hall Kuala Lumpur will be adopted.

The perceived need to influence office location decision is described in the Malaysian Planning documentations, the following extract being typical of the kinds of generalised policy objectives incorporated in the Structure Plan such as: i) to promote Kuala Lumpur as a choice location for international organisations and business entities to establish their regional offices and headquarters and ii) to create a technologically advanced city especially in the fields of building technology and design as well as information and communication technology (Draft KL Structure Plan, 2020). Much of the policy making and planning initiatives are focussed on the development companies and others that supply office premises, in the expectation and hope that the latter are able to accurately assess the requirements of the occupiers. An alternative to such a supply-orientated approach, an examination of the occupational motives of the occupants of the office buildings, is advocated here.

While older office buildings located in secondary location or on the fringe of CBD area are said to be more susceptible to being left vacant due to their unpopular office addresses and poor building images, similar buildings located close to the Kuala Lumpur City Centre (KLCC), an area within the Golden Triangle area gained from the strategic location and continued to enjoy sustainable occupancy rates (Rahim & Co, 2006).

By the third quarter of 2009, there are approximately 6.3 million square metres (68 million square feet) of office space in Kuala Lumpur (NAPIC, Q3, 2009). Of this amount, 79% is located

within the area demarcated by the City Hall of Kuala Lumpur as the Kuala Lumpur city centre. The average occupancy rate of the office space in Kuala Lumpur is 84% while the average occupancy rate of the office space in the city centre (as defined in the study) is 82% (NAPIC, Commercial Property Stock Report, 2009).

An overview of the occupancy rate of office space within the areas in Kuala Lumpur as defined by NAPIC (2009) shows varying figures as follows:

**Table 1:** Occupancy Rate of Office Space in Kuala Lumpur ((NAPIC, Q3, 2009)

Defined Area	Occupancy Rate
Golden Triangle	82%
Jalan Ampang	95%
Central Business District	85%
Within City Centre	83%
Suburban	83%

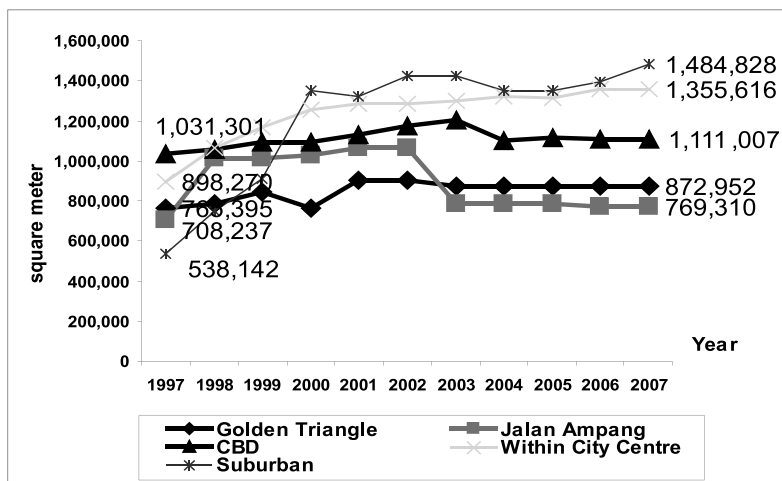
There has been a slight improvement of the office market over the past few years before the economic crisis of 2008 as evidenced by the improvement in the take-up rates of office space in the Kuala Lumpur office market for the period up to 2007. An observation of the 10-year supply trend from 1997 to 2007 is illustrated below.

Cross-sectional analysis by location and various development stages shows pertinent movements over the 10-year period from 1997 up to 2007. Although there has been an increasing trend of supply in the suburban area, the Kuala Lumpur city centre still has the largest concentration of office supply.

### Factors relevant to office occupation decisions

While a number of studies have been published in other countries on the overall requirements of office tenants for office

**Figure 2:** Supply of Office Space by Location



(Source: A E Ahmad, Z M Isa, 2008, NAPIC (various publications, 1998 – 2008))

occupation, limited number of study is known to exist that examines the important factors considered by the major tenant organisations in Malaysia. There appears to be a lack of precise knowledge for commercial property stakeholders especially property managers, owners/ investors and leasing agents in Kuala Lumpur to gauge the important considerations of the office space as a 'product offering' for occupation/leasing decision.

Historically, it has been claimed that firms choose to cluster in a centre that offers comparative advantage (Sing, Ooi, Wong, Lum, 2004). This gives rise to high concentration of employment which evolved through CBD (Marshall, 1961; Krugman 1991, Sing et. al., 2004). When CBD grows and reach a critical size, agglomeration benefits diminish (traffic congestion, increased office density etc.). The tenants' firms are more ready to trade off agglomeration economies for other advantages in new office location. Subcentres are formed as a result of the outward movement from the CBD (Richardson, 1978; DiPasquale and Wheaton, 1996). In an earlier study on the future of the city centres for property investments by Richard Ellis in 1996, office occupiers have indicated the following factors when considering relocating. They are total building occupational costs, quality of buildings, road infrastructure, security of the area, availability of staff, availability of car parking, quality of life for employees, access to client/target market, skills of staff, out of city centre, prestige location, rail and air infrastructure, competing companies in the area and city centre location. Total building costs and the

quality of accommodation are the most important factors while city centre location is the least important factor.

Agglomeration economies (Clapp, 1980; Bollinger et al., 1998) as an extension of the location literature have been identified as an important factor for the central location of firms. However, the role of face-to-face contact and the associated of agglomeration economies is not the only factor determining the location of a firm. Alexander (1979) argues against the over-emphasis of this factor and identifies other factors which include tradition, distance from the most prestigious addresses, proximity to inner city train station, link with commuter train and bus network or closeness to the main shopping centre. The need for face to-face contact and accessibility has been questioned with the advent of information and communication technology (ICT). However, it was also found that as technology progresses, the effect of IT is nominal on the demand for office space (Peter Dent et al (1998)). On the other hand, another study in Singapore had shown that the advent of ICT had reduced the need for face-to-face contact with customers and suppliers (Tien Foo Sing, *et al*, 2004).

There has been a strong proposition that within the location factors, accommodation has been overlooked (Louw, 1998). It was found that location has a major role in the decision making process, in particular for firms that want to rent office space. It is said that firms that rent office space are dependent upon the supply offered on the real estate market and what it offers. Thus, the core of the accommodation issue lies in bridging the gap between the static nature

of buildings and the dynamic development of organisations that have responded to technical developments and quickly changing markets. The type and size of premises will affect the productivity of the firm (Louw, 1998).

Examining the behavioural approach to firm relocation decision, it has been mentioned that there are given push and pull factors in the process. Frequently, push reasons are both internal and external to the firm. The main internal reason is related to pressure from growth: limited expansion space at current location or limited representivity of the present location (the need for it usually increases with the size and age of the firm). External factors include limited accessibility, deterioration of the building, environmental considerations, limited labour supply or high location costs. Pull factors are largely the opposite of the internal factors: enough space, accessibility to deliverers, suppliers, customers, the labour market, representivity, low costs and often locational amenities (Pallenberg et al, 2002). Studies have been conducted to explore the pull and push factors on location, building and organisational levels (Pen, 2002). Many of the factors that relate to these levels are from the behavioural context and are location specific which relate to the premise, organization or the environment.

The heterogeneity of office stocks has since then been included in studies to determine office space decision. On the demand side, assumption as to firms being rational, homogeneous and have perfect information on their choice of office location decision has been questioned (Wyatt, 1999; Leishman;

Watkin, 2004 and Leishman, Dunse, Warren and Watkin, 2003, Sing, Ooi, Wong, Lum, 2004). These studies provide findings that the office space preference decision varies between different types of occupiers. The occupiers' characteristics which influence the office space decision may vary between their nature and priorities. A study on the different profiles of occupiers in Singapore major commercial development revealed that firms placed significant importance on face-to-face convenience, image and branding of the office location (Sing et al, 2004).

In an earlier study to determine the causes and patterns of new space demand in Australian commercial property market, it was found that there are macro and micro influences in the decision making process (Higgins, 2000). They are the property market dynamics, technical change, political factors, economic factors, building locality, business profile, cost implications, lease arrangements and occupiable space. Thus it can be derived that the commercial property landscape is changing to accommodate the requirements of organisations. While it would be useful to examine the impact of the economic and political factors on the decision making process for office occupation, these factors are excluded in this study considering that they are not 'product offering' specific.

While the age of buildings may be one of the factors of consideration, a study had pointed out that there is no straightforward relationship between age of building and the degree of obsolescence (Richard Barras et al (1996). In a study of depreciation of the office market in Kuala Lumpur for the

period of 1996 and 1998, building obsolescence had largely been attributed to the impact of depreciation, which are property specific factors (Md Yusof A, 2000). Variations in offices' characteristics as denoted by site obsolescence, building obsolescence and physical deterioration explained the scale of depreciation of the offices in the city of Kuala Lumpur. Among these three, physical deterioration and obsolescence were found to be the major sources of depreciation. It would be worthy to note that age and the physical conditions of the office buildings are important factors of consideration for occupation.

A satisfied tenant is more committed, tend to be loyal and not move (Dogge, 2004). Various studies on the tenants' occupation within office buildings have been examined. Riannce (2007) in a study in Netherlands explored the keep factors that could retain tenants as they become satisfied at the existing office. It was discovered that there can never be certain keep factors for an office space decision as they tend to be exchanged with the push/pull factors. The important push/pull factors seem to be building factors while the important keep factors seem to belong to the buildings and the surroundings.

Babcock (2003) discussed the BOMA International results of survey on tenant satisfaction and tenant retention. The paper discussed the factors of consideration for tenants' retention which include adding up amenities whereby tenants look for a physical place in synchronisation with its current status. Location was ranked as the most crucial consideration in tenant attraction and retention whilst technology was the most

significant factor. CBE, University of California (1999) made a study on what office tenants want and how much they are willing to pay. The traditional areas of real estate decision-making were described highlighting the major factors under consideration. Sullivan (2006) highlights the results of a survey conducted among landlords and tenants (involving 6,642 readers of Building Operations Management) as to the level of satisfaction derived from leased space. The survey shows that a majority of tenants are consistently satisfied with more than two-third of their landlords and to responsiveness to requests and complaints.

RICS Tenant Satisfaction Index (2005) describes the index developed in providing an insight into the health of tenant relationships in the UK property industry. It is a measure of tenant satisfaction on the services provided by landlords. The study revealed that various component of performance used need not include location but also to include standard of premises and value for money, landlord and agent communication, contract detail (ease of contract alteration and problem resolution. lease flexibility). Historically, the main concerns of a tenant have been location, standard and rent. In a study to determine the main factors that determine the consumer choice for office space in Riga Latvia, good location, parking availability, rent and office infrastructure emerged as important (Beltina, 2006).

A research report entitled "Why rent in Kuala Lumpur" by the National Institute of Valuation (INSPEN), Malaysia in 1993 examined the key selection criteria for office space



occupation in Kuala Lumpur. Key factors identified were location, building design, building services, rental rates and building image. The study also revealed that a majority of the buildings are managed in-house. It was also generally observed that the tenants in the Golden Triangle Area were more maintenance conscious than their counterparts in the CBD area, possibly due to their derived expectation of the better quality services to correspond with the comparatively higher service charge levied on them. The study however did not specifically rank the importance of the facilities accordingly or gauge the level of tenant satisfaction in terms of expectation and performance towards the factors identified. It is interesting to note that various factors have been identified to solicit tenants' requirements from previous studies and it would be useful to find out whether these factors are still relevant in the current market office and business scenario in Kuala Lumpur.

There are numerous factors in varying degrees that may influence tenant office occupation decision. It can be observed that there are four main areas which can be said to encompass the "product offering" to the tenant as a consumer. Monetary factors have been one of the considerations and so are the other factors such as location, lease features and building or physical characteristics of the space. A summary of the comprehensive set of factors and sub factors that are potentially relevant to office occupation decisions as highlighted in the literature is illustrated in Table 1.

While it would be interesting to note the factors highlighted in previous

studies, it would be useful to determine the factors considered relevant by tenants in the office buildings in Malaysia by soliciting the views of the property consultants/leasing experts in Kuala Lumpur. The initial part of the study involves the derivation of important factors that are relevant in the Kuala Lumpur office market by seeking the views of the property experts. They are chosen among senior managers of property consultancy firms and property/building managers that have dealt with the tenants in top grade office buildings at Kuala Lumpur city centre.

### **The Delphi Approach**

In seeking the views of the experts and identifying the factors that are important to tenants in office occupation decision in Kuala Lumpur, Malaysia, a Delphi approach was adopted. This approach was chosen as it is an iterative approach used to collect and distill the judgments of experts using a series of questionnaires interspersed with feedback. It is often used as a qualitative forecasting technique but is also used to investigate and understand the factors that may influence decision making on a specific issue, topic or a problem area. The Delphi method has its origins in the American business community and has since been widely accepted throughout the world in many industry sectors including health care, defence, business, education, information technology, transportation and engineering. Delphi has found its way into industry, government, and finally, academia. It has simultaneously expanded beyond technological

**Table 1:** Summary of Main Factors and Sub Factors affecting Office Occupation Decision

Main Factors	Sub-Factors
Location	Branding/Image; Access to Market, Amenities, Skilled Labour Pool; Access to Cheap/non-skilled Labour; Convenience to Residential Area; Proximity to Similar Business; Proximity to Complementary Business, Proximity to support services suppliers, Factor of Production Costs, Access to Raw Materials, Proximity to Investors, Corporate Headquarters, Financiers, Specialised services, Government Authorities related to Business; Accessibility to Public Transport Terminal, Major Trunk Roads/highways; Accessibility to Public Transportation, by Private Vehicle; Proximity to other sub urban centres; Market Size; Visibility/ Exposure to Clients; Proximity to Competitors in Similar Business; Level of Criminal Rate, Pollution; Traffic Condition
Lease Features	Use of Premise; Indemnity; Compliance to Law and In House Regulations; Fitting Out Clause; Alteration and Renovation Clause; Payment of Monies Clauses; Termination Clause; Review/ Renewal Terms; Repair and Insurance; Assignment/Sublet; Break Clause; Lease/Contract length; Incentives
Monetary Consideration	Rental Rate; Service Charge Rate; Total Occupancy Cost; Cost of Fit Out; Running Cost; Cost of Exiting; Cost of Internal Infrastructure, Cost of Office Administration
Building Features and Services	Age; No of Storey (height); Finishes Specifications; Design of Entrance and Foyer; Modern Prestigious Building; Prominence of Entrance; Quality of Reception; Quality & Presentation of External Finishes; Common Space Area; Building Visibility; Building Identity/Image; External Façade; Internal Space Finishes; Quality architectural design and building finishes  Security & Access Control; Responsible management and maintenance teams; Maintenance policy; Cleaning/Housekeeping Services; Energy Conservation & Recycling Policies; Computer Based Management/Maintenance Systems; Safety Policy & Procedure; Fire Prevention & Protection; Responsive to service requests; After Hours Operation  Floor Plate Size; Floor-Ceiling Height; Building Size; Flexible Space Layout & Large Floor plate; Orientation of office space; Good geomancy / feng shui; Availability of space for future expansion; Comfortable & Secure Working Environment; Space Efficiency; Column layout & Subdivisibility; Floor Loading; Underfloor Trunking; Riser Space for ICT & Security Systems; Adequacy of Natural Lighting; Energy Efficient/ Green Buildings; Design and Space Planning; Raised Floor

	<p>Toilet &amp; Sanitary Facilities; Air-conditioning system; Electricity system; Modern IT &amp; Telecommunication system; Building automation &amp; Energy Management System; Fire fighting system; Adequacy of Ventilation; Standby Power Supply; Energy Generating Capacity; Control of M &amp; E Services; Control of Noise</p> <p>Ease of Use of Entrance; Entrance Capacity; Location of Lifts, Stairs &amp; Corridor; Capacity of Lifts; Speed of Lifts; Passenger Lifts Performance &amp; Control; Good Lifts &amp; Loading Bay Design; Capacity of Stairs; Adequacy of Good; Access &amp; Circulation feature; Capacity of Corridors for movement; No of Car Parks; Car park ingress/egress to/from building; Building Way finding e.g. Building Directory/Signage; Ease of Disabled Circulation;</p> <p>Food &amp; Beverage outlets; Sport &amp; Recreational facilities; Landscaping; Bank, Postal &amp; Retail Services; Provision of Vending &amp; Catering Services; Conference facilities</p>
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(This study, 2009)

forecasting (Fowles, 1978). Since the 1950s several research studies have used the Delphi method, particularly in public health issues and education areas (Adler and Ziglio, 1996; Cornish, 1977).

### ***Overview of Delphi Method***

Following the original method which was developed in the 1950s, the Delphi method has evolved and been used across disciplines to reach an outcome based on consultative basis. It is based on a structured process for collecting and synthesising knowledge from a group of experts by means of a series of questionnaires accompanied by controlled opinion feedback (Adler and Ziglio, 1996). It is also a method for structuring a group communication process to facilitate group problem solving and to structure models (Linstone & Turloff, 1975). The method can be used as a judgment, decision-aiding or forecasting tool (Rowe & Wright, 1999), and can be applied to problems that do not lend themselves to precise analytical

techniques but rather could benefit from the subjective judgments of individuals on a collective basis (Adler & Ziglio, 1996). The Delphi method is a mature and a very adaptable research method used in many research arenas by researchers across the globe. Green and Price (2000) have speculated on the future direction of facilities management using a Delphi panel in the UK. According to Turoff (1970), there are four possible objectives or secondary goals for any Delphic exercise, namely:

1. To explore or expose underlying assumptions or information leading to differing judgments;
2. To seek out information that may generate a consensus of judgment on the part of the respondent group;
3. To correlate informed judgments on a topic spanning a wide range of disciplines;
4. To educate the respondent group as to the diverse and interrelated aspects of the topic.

Since Delphi is founded on the old premise that the opinions of more than a person are better, it utilises the use of panels of experts for obtaining information. It will then systematically attempt to produce a consensus of opinion, and sometimes more importantly identify opinion divergence. It provides anonymity of both the experts and identification of the expert's statements throughout the exercise.

Within the extended use of the Delphi Method, a series of rounds of communication between the experts shall be made and between which a summary of the results of the previous round is communicated to and evaluated by the participants. The second and successive rounds often produce "a narrowing of the initial spread of opinions and shifting of the median .... If no consensus emerges, at least a crystallizing of the disparate positions usually becomes apparent" (Gordon, 1971).

### ***Strengths and Weaknesses***

The major advantage of using the Delphi Method is that it permits the researcher to obtain an objective consensus of expert judgment on the subject under study. It also makes the rationale underlying a specific estimate or prediction explicit for everyone. There have been several studies (Ament, 1970; Wissema, 1982; Helmer, 1983) supporting the Delphi method. These studies seem to suggest that in general, the Delphi method is useful to explore and unpack specific, single-dimension issues. As Enzer *et al* (1971) observe, Delphi sessions are usually better than other methods for eliciting and processing judgmental data, since they

maintain attention directly on the issue, provide a framework within which individuals with diverse backgrounds or in remote locations can work together on the same problems, and produce precise documented records.

On the other hand, the main weakness of the Delphi Method is that a truly perspicacious expert's judgment might be lost when a consensus that actually represents a range of judgments is presented. Therefore, it is important to include judgments outside the consensus in footnotes or appendixes, as appropriate. Another weakness is that in face-to-face Delphi sessions, "Group Think" problems may occur when some experts may be swayed more by the rhetoric or strength of personality of one expert and tend to discount the validity of other experts' arguments. It is usually slow and time-consuming. If the Delphi is carried out through the mails with a large panel, each round could take several months. However, if it is conducted in a conference environment, the preparation of rounds and collation of responses could be a matter of hours.

### ***Administration and Implementation***

The basic Delphi Method begins with a series of first round questions asked individually of experts to submit their judgments on the subject. The results of the first round judgments are then tabulated and the results are sent back to the experts for modification. In essence, the experts are asked in the second round to reevaluate their original judgments in light of the average estimates calculated in the first round. This procedure of reevaluation is continued for several

rounds until a fairly high degree of consensus is reached, or until the experts no longer modify their previous estimates.

Selecting research participants is a critical component of Delphi research since it is their expert opinions upon which the output of the Delphi is based (Ashton 1986; Bolger & Wright 1994; Parente, Anderson, Myers, & O'Brien, 1994). The sample size varies in their studies from 4 to 171 "experts". As such, it can be concluded that there is no "typical" Delphi; rather that the method is modified to suit the circumstances and research question.

### **Undertaking the Delphi Method for this Study**

#### ***The Delphi Panel and the Delphi Process***

The focus of the study was the elicitation of knowledge and opinion from individuals with broad cross-sectional perspectives on tenants' selection for office space occupation decisions. The aim here was to survey field experts' perspectives of tenants' selection of the relevant and important factors with a view to consolidating the factors listed in Table 1. Thus tenants were not selected as respondents in this survey but rather were involved separately in a different part of the study. The panel of respondents was designed to have representatives from two groups comprising the property consultants/leasing agents from established firms who generally interact with prospective tenants and property/leasing managers of top grade office buildings in Kuala Lumpur. A total of

forty persons i.e. twenty from each group were invited to participate in the first round of the study. The study was conducted in the strict confidence throughout and anonymity was guaranteed to respondents.

The first round of the questionnaire was emailed to the panellists in mid November 2009. Reminder notices via email and telephone calls were sent to all experts who had not replied between late November and early December 2009. A total of 27 panellists agreed to participate in the first round of the survey, giving a response of 70 percent. They comprise seventeen (17) property consultants/agents who hold senior management posts and ten (10) property/building managers. The questionnaire was designed on a five-point Likert scale to measure a range of opinions from "Not very important" to "Very important". The Statistical Package for Social Sciences (SPSS) was employed to analyse the data using the Descriptive Statistics.

The first round responses were collated and analysed and an interim finding was sent back to the first round participants in late December 2009 in order to get feedback and comments. During the second round of the survey, the experts are given only the measures of central tendency for the responses selected by experts in the first round, and are asked to explain in detail when their second round judgments differ substantially from the first round's measures of central tendency. The procedure however stopped at the second round when most of the experts decided against varying from their first round responses despite being presented with evidence of different opinions from other

respondents. A total of 20 panellists replied to the second round to yield a response rate of 71 percent. The response from the second round demonstrated strong agreement on the broad findings. Overall, it was felt that a third round of the study would not add further to the understanding already gained during the first and second round and thus the study was concluded. The results of the study based on the two rounds are presented here.

### **Findings and Discussion**

In the first round, the panellists were asked to rate the importance of factors under each category of economic/monetary consideration, location, lease features, and building features, services and management. From the list of factors listed in Table 1, the panels' choices of the important factors under the various categories are presented in Table 2. Since there were no changes to the responses in the second round, the factors identified in the earlier round were taken to be the important factors.

Figures 1, 2, 3 and 4 reveal the relative importance of the various sub factors through the responses obtained from the panel during the first round.

#### ***The importance of factor: Location***

Under the location category, the top five factors that have been rated as important by the panel of experts are image/branding of the location, access to amenities, accessibility to public transport and terminal, traffic condition and the

level of crime. The least important factors are factors of production cost and access to raw materials and semi-finished products. Considering that the businesses are mainly service orientated in nature in the central business district, it can be observed that the responses given by panels are in tandem with the some of the factors highlighted earlier in the literature although the impact of agglomeration remains to be explored further.

#### ***The importance of factor: Lease Features***

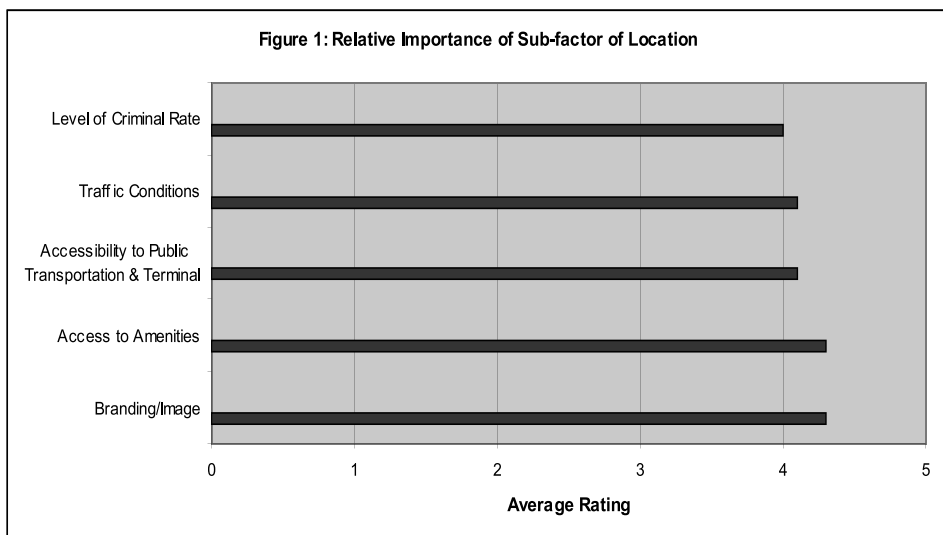
Under the lease features category, the top three factors that have been rated as important by the panel of experts are: renewal terms, length of the lease and termination clause. It can be seen that the tenants consider security of tenure important to cover the term of their business activities as in the use of the office space.

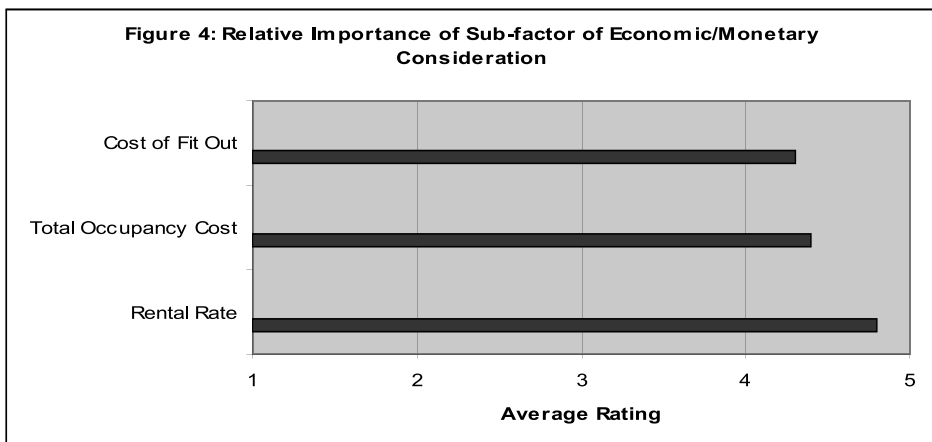
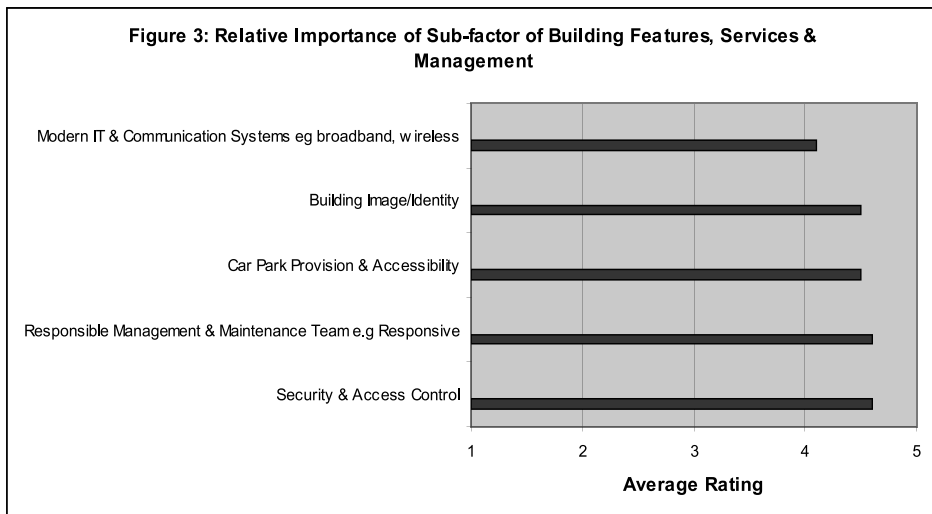
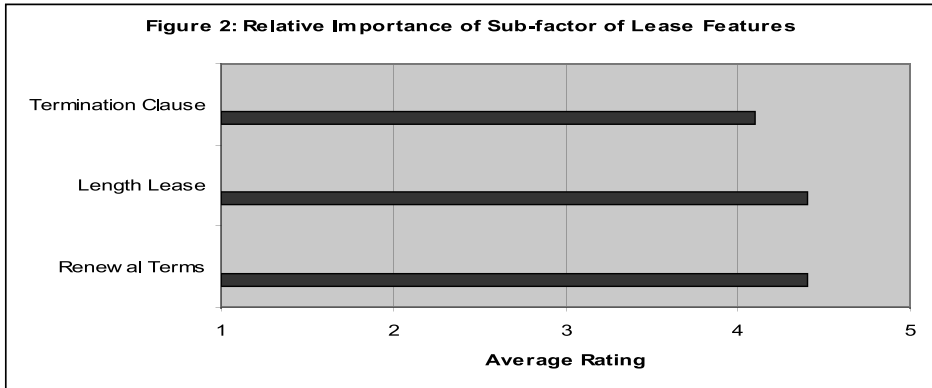
#### ***The importance of factor: Building Features, Services and Management***

Under the building features, services and management, the top five important factors are: responsible management and maintenance team, security and access control, car park provision and accessibility, building image and identity and modern IT and communication systems. With the responses given highlighting the building offering, it can be said that the important factors relate to the provision of top quality services and image that serve to support the activities of the tenants.

**Table 2:** Summary of the Mean and Standard Deviation of the selected important factors for location, lease features, building features, services & management and monetary consideration

Evaluation Factors	Mean	Standard	Deviation
<b>1. Location</b>			
a. Branding/Image	4.3	4.0	0.6
b. Access to Amenities	4.3	4.0	0.6
c. Accessibility to Public Transportation and Terminal	4.1	4.0	0.7
d. Traffic Conditions	4.1	4.0	0.7
e. Level of Crime	4.0	4.0	1.1
<b>2. Lease Features</b>			
a. Renewal Terms	4.1	5.0	0.6
b. Length Lease	4.4	4.0	0.6
c. Termination Clause	4.1	4.0	0.8
<b>3. Building Features, Services &amp; Management</b>			
a. Security & Access Control	4.6	5.0	0.5
b. Responsible Management & Maintenance Team e.g Responsive	4.6	4.5	0.5
c. Car Park Provision & Accessibility	4.5	5.0	0.6
d. Building Image/Identity	4.5	5.0	0.6
e. Modern IT & Communication Systems e.g broadband, wireless	4.1	4.0	0.8
<b>4. Monetary Consideration</b>			
a. Rental Rate	4.8	5.0	0.5
b. Total Occupancy Cost	4.4	5.0	0.7
c. Cost of Fit Out	4.3	5.0	0.8







***The importance of factors: Economic/Monetary Consideration***

Under the economic/monetary consideration, the top three factors are: rental rate, total occupancy cost and cost of fit out. The responses given highlight the economic consideration of the tenants’ business activities and thus would be the deciding factor in the consideration of which office space to choose.

Of the four factors, monetary consideration emerged as the most important while building features, services and management lease features and location ranked as the second, third and fourth most important. In identifying the importance of sub factors, a summary of their order of importance is shown in Table 3.

**Conclusion**

The study was conceived in order to investigate and identify the important factors for office space occupation decision in Kuala Lumpur city centre. A comprehensive list of factors relevant in the decision making process have been identified. A Delphi approach was deployed to capture and consolidate experts’ knowledge and opinion. The approach provides a well-established methodology for obtaining information from a group of individuals who have relevant knowledge and experience. The findings reflect opinions and views on office occupation selection factors generally used by tenants in Kuala Lumpur. A ranking of the factors based on average ratings have been reported.

**Table 3:** The order of importance for the sub factors

Order of Importance	Sub factors
1	Rental rate
2	Security & Access Control Responsible Management & Maintenance Team
3	Building Image/Identity Car Park & Accessibility
4	Total Occupancy Cost Length Lease Renewal Terms
5	Cost of Fit Out Branding/Image of Location Access to Amenities
6	Accessibility to Public Transportation & Terminal Traffic Condition Modern IT & Communication System
7	Level of Crime

Source: This study, 2009

The top five important sub factors identified by the panel are rental rate, security and access control, responsible management and maintenance team, car park provision/accessibility and building image/identity. With the given responses, the results will then be used in the study to determine the relative importance of the factors and sub-factors across the different categories of office buildings tenants in Kuala Lumpur.

As with other survey methods or any Delphi type study, the findings reported here must be interpreted and generalised with care. The study provides broad and substantive views on factors affecting the office occupation decisions. The panel for instance was not chosen randomly. They were chosen based on their experience and knowledge regarding the topic being surveyed and willingness to participate. In the social sciences Delphi approach has the potential for being used and moulded in many varied ways. Based on this view, this approach can be seen to have more utilisation and creative uses.

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