

UNIVERSITI TEKNOLOGI MARA

**BUILDING AND LOCATIONAL
CHARACTERISTICS' QUALITY OF
PURPOSE-BUILT OFFICES
IN MALAYSIA AND THEIR
RELATIONSHIP WITH RENTALS**

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Thesis submitted in fulfilment
of the requirement for the degree of
Doctor of Philosophy

Faculty of Architecture, Planning & Surveying

September 2015

ABSTRACT

Purpose-built office (PBO) market in Malaysia has shown positive developments and increasing level of competitiveness. Many characteristics of PBO were unveiled by virtue of recent studies, market demand, and technology growth and new guidelines/ standards in order to fulfil the property market participants' need. As a result, the characteristics of Malaysia's PBO have become more complex. The increasing complexity of characteristics would entail greater needs on their influence on the rental levels of the PBO space. Nevertheless, there is a lack of research in the country that had actually studied in detail the influence of both the building and locational characteristics on rental levels alone in Malaysia. Therefore, the purpose of this thesis is to establish the building and locational characteristics' quality of PBO and their relationship with rentals in the Malaysia's office property market. Integral to achieve this objective, various characteristics that cover all fields are grouped under eight categories. Delphi Method has been selected as a reliable qualitative method according to the local context in developing building and locational characteristics of ranking through the eyes of local expert panels that can deliver guidance to researcher in recognising the quality of each characteristics of PBO in the local environment. In line with the gap of knowledge in relation to the need to adopt a more consumer oriented approach and the utilisation of high level spatial technology to refine the measurement of variables, modification and improvement based on the current method that is Building Quality Index (BQI) has been applied into this research. Building and Locational Quality Index (BLQI) was introduced as a unique approach whereby it emphasised on observation method for the quality level of each of the characteristics of PBO in detail. It is a comprehensive method that can combine the data between weightage of importance and weightage of score for each PBO characteristics. Analytical Hierarchy Process (AHP) method analysed the weightage of importance based on the occupants' perception towards PBO. An analysis through a detail observation was done based on previous developed building and locational characteristics' ranking of PBO. There are differences on PBO characteristics that became the variables, building characteristics of PBO that have been measured through building inspections and an informal interview whereas for locational characteristics of PBO, Geo-information System software measured the distance and radius precisely. BLQI method also takes into account the subjectivity and objectivity in making a measurement. Hence, by having quality index for building and locational characteristics of PBO, regression analysis was applied to analyse the relationship between these characteristics' quality of PBO and rental. Moreover, in benefiting from a plethora of variables, several areas in Kuala Lumpur were selected to provide the data on PBO. The study was successful in identifying the relationship of each characteristics of PBO with rental which they have given different results in each study area. Thus, this study is expected to provide insights to the property market participants in improving the performance of the office property market particularly in Malaysia so that it can compete in the international arena.

TABLE OF CONTENT

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENT	vi
LIST OF TABLES	xiv
LIST OF FIGURES	xix
LIST OF ABBREVIATIONS	xxii
CHAPTER ONE: BACKGROUND OF THE RESEARCH	
1.1 Introduction	1
1.2 Problem Statement	4
1.3 Aims, Research Objectives and Research Questions	7
1.4 Scope of Research	8
1.5 Significance of the Research	8
1.6 Organisation of the Thesis	9
1.7 Conceptual Research Framework and Matrix of the Research	12
CHAPTER TWO: BUILDING AND LOCATIONAL CHARACTERISTICS OF PURPOSE-BUILT OFFICE AND THEIR RELATIONSHIP WITH RENTALS	
2.1 Introduction	15
2.2 The Concept of Purpose-Built Office	16
2.3 An Overview of the Development of Purpose-Built Offices in Malaysia	22
2.3.1 The Development Trend of Purpose-Built Office in	23

Kuala Lumpur

2.4	The Characteristics of Purpose-built Office in a Local and Global Context	27
2.4.1	Designation and Identification of Building and Locational Characteristics of Purpose-Built Office	32
2.5	Factors in Determining Rental and Their Relationship with Building and Locational Characteristics' Quality of Purpose-Built Office	38
2.6	Background Literature on the Relationship between Building and Locational Characteristics' Quality with Rentals	39
2.6.1	The Capacity of the Physical Space of a Building	40
2.6.2	Easy Internal Access	42
2.6.3	Internal Services	43
2.6.4	Physical Structure	43
2.6.5	Environmental Location	45
2.6.6	Business Environment	46
2.6.7	Building's Physical Environment	48
2.6.8	Building's Owner Rights	48
2.7	Summary	49

CHAPTER THREE: THE MEASUREMENTS OF BUILDING AND LOCATIONAL CHARACTERISTICS' QUALITY OF PURPOSE-BUILT OFFICE

3.1	Introduction	51
3.2	Identifying Quality for Building and Locational Characteristics of Purpose-Built Office	52
3.3	Identification of Methods for Building and Locational Characteristics' Quality of Purpose-Built Office	58
3.3.1	Development of Building and Locational Characteristics' Ranking of Purpose-Built Office	59
3.3.1.1	Focus group	60
3.3.1.2	Social choice theory	61

3.3.1.3	Creative problem-solving process	62
3.3.1.4	Nominal group technique	62
3.3.1.5	Delphi method	63
3.4	Measurement Tools of Building and Locational Characteristics’ Quality of Purpose-Built Office	66
3.4.1	Guidelines/ Grading/ Classification Schemes	67
3.4.2	Service Tools and Method	68
3.4.3	Real Estate Norm	69
3.4.4	Building Quality Assessment	69
3.4.5	Building Quality Index	70
3.5	Application and Improvement of Building Quality Index (BQI) in Local Contexts	73
3.5.1	Weightage of Importance for Building and Locational Characteristics of PBO	73
3.5.2	Weightage Score of Building and Locational Characteristics of PBO	76
3.6	Summary	78

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1	Introduction	80
4.2	Defining the Research Questions	80
4.3	Selection of Research Methodology	81
4.3.1	Triangulation (Mixed Method)	82
4.4	Research Method	87
4.4.1	Research Method for Objective 1	87
4.4.1.1	Source documents	88
4.4.1.2	Interviews	88
4.4.1.3	Selection of interviewees	88
4.4.1.4	Interview procedure (Delphi Method)	90
4.4.1.5	Method of data analysis (Delphi Method)	93
4.4.2	Research Method for Objective 2	94

4.4.2.1	Sources and methods of collecting primary data	95
4.4.2.2	Exploratory questionnaire survey on perception of occupants on importance of building and locational characteristics of PBO	95
4.4.2.3	Observation survey on building and locational characteristics of PBO	103
4.4.2.4	Building and locational characteristics index (BLQI) of purpose-built office	112
4.4.3	Research Method of Objective 3	114
4.4.3.1	Source of data	114
4.4.3.2	Method of data analysis - Identifying the relationship between building and locational characteristics' quality of PBO with rentals	115
4.5	Case Study	119
4.5.1	Selection of Case Study	120
4.6	Pilot Surveys	122
4.7	Validation of the Test Results	124
4.8	Problems Encountered	125
4.9	Summary	126

**CHAPTER FIVE: QUALITATIVE DATA ANALYSIS AND FINDINGS:
DEVELOPMENT OF RANKING CHARACTERISTICS FOR
PURPOSE-BUILT OFFICES (PBO)**

5.1	Introduction	127
5.2	The Characteristics of the Delphi Method Analysis	129
5.2.1	Expert Panels Selection Process & Analysis	129
5.2.2	Analysis on the Delphi Method Process	132
5.3	Delphi Analysis in Round One Interview	135
5.3.1	Analysis on the Expert Panels' Feedback in Round One Interview	136
5.3.1.1	Preliminary interviews in round one	137

5.3.1.2	Round one interview – general summary	139
5.4	Delphi Analysis in Round Two Interview	146
5.4.1	Analysis of the Expert Panels’ Feedback in Round Two Interview	149
5.4.1.1	Round two interview – general summary	150
5.5	Delphi Analysis during the Third Round (Final Round): Interview and Validation	159
5.5.1	Analysis on the Expert Panels’ Feedback and Validation in Round Three Interview Sessions	162
5.6	Discussion on Findings	164
5.6.1	Research Question 1	165
5.7	Summary	173

**CHAPTER SIX: QUANTITATIVE DATA ANALYSIS AND FINDINGS:
EXPLORATORY SURVEY ON BUILDING AND LOCATIONAL
CHARACTERISTICS’ QUALITY OF PURPOSE-BUILT OFFICES**

6.1	Introduction	174
6.2	Area of Study and Sample of PBO	177
6.2.1	Golden Triangle (GT)	178
6.2.2	Central Business District (CBD)	179
6.2.3	Within City Centre (WCC)	181
6.2.4	Suburban (SUB)	183
6.3	Frequency of Respondents	184
6.4	Part 1: Analysis on the Importance of Building and Locational Characteristics of Purpose-Built Office (PBO)	187
6.4.1	The Importance of Level 1’s Characteristics of Purpose-Built Office	195
6.4.2	The Importance of Level 2A’s Characteristics of Purpose-Built Office (Presentation)	197
6.4.3	The Importance of Level 2B’s Characteristics of Purpose-Built Office (Management)	199
6.4.4	The Importance of Level 2C’s Characteristics of	201

	Purpose-Built Office (Functionality)	
6.4.5	The Importance of Level 2D's Characteristics of Purpose-Built Office (Services)	203
6.4.6	The Importance of Level 2E's Characteristics of Purpose-Built Office (Access & Circulation)	205
6.4.7	The Importance of Level 2F's Characteristics of Purpose-Built Office (Location)	207
6.4.8	The Importance of Level 2G's Characteristics of Purpose-Built Office (Green Building)	209
6.4.9	The Importance of Level 2H's Characteristics of Purpose-Built Office (Amenities)	211
6.5	Part 2: Analysis on the Quality of Building and Locational Characteristics of Purpose-Built Office	213
6.5.1	Raw Score Evaluation for the Quality Level of Building Characteristics of PBO	217
6.5.2	Raw Score Evaluation for the Quality Level of Locational Characteristics of PBO	229
	6.5.2.1 Distance matrix	234
	6.5.2.2 Radius	242
6.6	Part 3: Analysis on Building and Locational Quality Index (BLQI) of Purpose-Built Office	245
6.7	Discussion on Findings	249
	6.7.1 Research Question 2	249
6.8	Summary	253

**CHAPTER SEVEN: DATA ANALYSIS AND FINDINGS
(QUANTITATIVE): THE QUALITY OF BUILDING AND LOCATIONAL
CHARACTERISTICS OF PURPOSE-BUILT OFFICES AND THEIR
RELATIONSHIP WITH RENTALS**

7.1	Introduction	254
7.2	Sources of Data	255

7.3	Data Screening to Execute Regression Analysis	259
7.3.1	The Differences Mean Test between BLQI, Presentation, Management, Functionality, Services, Access and Circulation, Location, Green Building, Amenities and Rental Towards Locations	259
7.3.2	Descriptive Analysis Mean and Standard Deviation	260
7.3.3	Assumption of Regression Analysis	266
7.3.3.1	Missing values	266
7.3.3.2	Outliers	267
7.3.3.3	Normality test	268
7.3.3.4	Homoscedasticity	270
7.3.3.5	Independence residual (error)	273
7.4	Correlation Analysis	274
7.5	Regression Analysis	278
7.6	Discussion on Findings	293
7.6.1	Research Question 3	293
7.7	Validation of the Results	299
7.8	Summary	301

CHAPTER EIGHT: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1	Introduction	303
8.2	Summary of Research Process	303
8.2.1	Comprehensive Literature Review	305
8.2.2	Research Design and Methodology	307
8.3	Summary of Major Findings	308
8.3.1	Building and Locational Characteristics' Ranking of Purpose-Built Office	309
8.3.2	Building and Locational Quality Index (BLQI) of Purpose-Built Office	310

8.3.3	Significant Influences Framework of Building and Locational Characteristics' Quality with Rentals	311
8.4	Contributions to Knowledge	313
8.5	Limitations of study	314
8.6	Scope for Further Research	314
8.7	Conclusion	315
	REFERENCES	318
	APPENDICES	336
	AUTHOR'S PROFILE	368

CHAPTER ONE

BACKGROUND OF THE RESEARCH

The aim of this chapter is to give an understanding regarding the purpose of the research. It provides an overview on the topic area of the research and outlines its structure. This chapter also identifies the issues from the previous research and addresses them in order to develop the aims and objectives of the research. The significances of this research are also highlighted. Finally, this chapter ends with an organisation of the thesis.

1.1 INTRODUCTION

The development of purpose-built office (PBO) market in Malaysia is basically determined by supply and demand. It has been showing a positive development since 1990s and plays a vital role in contributing to the property investment portfolio in the office property market in Malaysia. During the rapid economic growth, Malaysia had enjoyed an increasing demand for PBO mainly contributed by the strong economic market, and the improved development projects conducted by public and private sectors (Ismail, 2008). It is verified by the National Property Information Centre (NAPIC) report; the stability of the economic condition has a major impact on the PBO market (NAPIC, 1994). This statement is also clarified in a different context in the report published by Rahim & Co (2008) whereby the firm economic growth attributed to robust the domestic demand driven by strong domestic consumption and investment activity on PBO.

Since the PBO market in Malaysia has shown positive developments, key indicators are essential in helping policy makers and investors to make objective assessment on the market situations (Ismail, 2008). The measurement of the performance for office property over time is best achieved by using property indices (Brown & Matysiak, 1995). Indices are used primarily by investment institution and investment analysts as their preferred basis for comparison between the major property sectors and to compare directly with other investment assets such as shares, bonds and cash (Finlay & Tyler, 1991; Brown & Matysiak, 1995). Fortunately,

Malaysia has ultimately launched the PBO rent index on 19th July 2012 as a guideline to assist PBO market participants in their investment decision, particularly for ongoing rental situation in the Malaysian PBO market (NAPIC, 2012). This PBO rent index (PBO-RI) aims to improve the market transparency on the commercial property market in this country, to assist investors and to be able to gauge the national economic performance in general and the commercial property economy, specifically (NAPIC, 2012).

In the development of the PBO indicators especially in rental index, however, there are many aspects that need to be considered. The most important aspect is building the assessment tools. In addition, there have been many building assessment tools emerging parallel with the increasing of PBO market (Safian & Nawawi, 2013a). These building assessment tools frequently involve property valuation, property market appraisal, and building performance evaluation. Recently, there are many new building assessment tools of PBO developed according to technology growth and national policy such as green building, office classification, and other related sustainable models (Safian & Nawawi, 2013a). The tools emphasize on the multiplicity of characteristics in order to meet the needs of property market participants and to attain the stability of demand and supply in the recent PBO market. Therefore, PBO market has become increasingly competitive.

This research, however, intends to focus on the building and locational characteristics of PBO. There are a number of characteristics that can be found in the current building assessment tools. From physical to non-physical aspects, all these elements have been pondered upon within the building assessment tools. The identifications of these characteristics are crucial in providing ideas toward the development of the building assessment tools in order to facilitate the property market participants in evaluating their property efficiently based on their needs such as investment, management, or business planning (Bender et al., 1999; Daud et al., 2010a; Olayonwa et al., 2012).

Many literatures have indicated that the identification of office building characteristics are practical to design building performance tools such as grading, classification, green building and sustainable development (Sinou & Kyvelou, 2006; Wilkinson & Reed, 2006; Daud et al., 2010b). However, each of these characteristics applied on the PBO's assessment tools are different according to its purpose and suitability (Safian & Nawawi 2013b). Therefore, it is essential to construct a

structured framework of building and locational characteristics of PBO that reviews all elements in the country.

Primarily, building characteristics have been used as a basis to determine office property value, price, rental as well as building performance. In Malaysia, for instance, building performance indicator for green building namely Green Building Index Malaysia (GBIM) was officially launched in May 2009 (Rahardjati et al., 2010). Many new guidelines on green building were revealed during the launch. On the other hand, with regards to the PBO rent index launched, there are also new characteristics and modern model unveiled by government, which have gained supports from many experts particularly from universities, private sector as well as government bodies (NAPIC, 2012). It shows that both government and private sectors are concerned with this issue so as to ensure the PBO market competitive and attractive.

Basically, like any other properties, PBOs are heterogeneous goods, which held their own building characteristics that make it different from each other (British Council for Offices, 1994). Heterogeneous good is the term used for a property that carries out a similar function but varies in another area (Dunse & Jones, 1998; Adair et al., 1997; D'Arcy et al., 1994). This issue means in spite of the PBO having a similar function or size of space; they still differ in many areas such as building and locational characteristics. Accordingly, a convenient designation of building and locational characteristics of PBO is needed in order to ease the property market participants in their investment decision as well as to develop reliable tools for building assessment.

In a global context, many building characteristics framework can be found and applied by several developed countries, for instance, Australia, United States of America and United Kingdom. These countries have been progressive in using these frameworks to categorise and to evaluate the PBO's performance to give opportunities for investors, tenants and owners to promote their PBO or office property in order to get a high return (Olayonwa et al., 2012).

Theoretically, price and rental of PBO have been resolved by market conditions via property equations; however, specific characteristics that have influence on the rental and price of PBO space are still unclear. Most of the existing research on this related topic has clearly stated that office building characteristics or attributes immensely influence the value of a PBO space (Frew & Jud, 1988; Dunse & Jones, 1998; Ho et al., 2005). Furthermore, researchers have agreed that the design

and quality of the characteristics, combined with the specific location typically determine the rental and price for the PBO space (Adnan & Daud, 2008). This concept is relevant to all office properties, whether they are held as freehold or leasehold assets.

Based on the discussion above, there are some issues that need to be highlighted. This research intends to provide a better understanding on the building and locational characteristics' quality of PBO and their relationship with rentals. This is conducted by identifying the specific characteristics involving both building and locational characteristics of PBO and the suitable measurement of PBO's quality. These will be then be used as a baseline for the measurement of the specific characteristics and their relationship with rentals. Therefore, this research focuses on the determination of both building and locational characteristics of PBO in the country and ranks them as a new indicator of PBO's quality.

It is hoped that the findings of this research will improve the measurement tool as a reliable indicator of the performance for PBO. It is vital to understand the specific characteristics' quality of PBO and their relationship with rentals as it is the fundamental method in designing both building and locational characteristics of PBO as the elements used to evaluate PBO performance. As a result, the relationship between characteristics' quality of PBO and rentals will help the property market participants to manage their property in terms of making decision in business and investment as well as to improve our property market to become more competitive.

1.2 PROBLEM STATEMENT

An increasing concern over the relationship between the characteristics of PBO and rentals has prompted the need to understand the importance of existing characteristics of PBO that have been used in a local context. In Malaysia, studies have been largely concentrated on the building quality level; the internal and external factors but each characteristic still has not been tested on price, particularly in PBO rental (Safian, 2009). The question here is how significant is this study in identifying the relationship between building and locational characteristics' quality of PBO with rentals from the Malaysian perspectives.

Fundamentally, rental value is one of the elements in the measurement of property investment performance (Adair et al., 2005). There are many studies

implicated the significant influences between office building characteristics and rental levels in terms of investment performance. Some of the studies show that high office building quality leads to higher returns and it is shown to have an impact on depreciation and investment performance (Baum, 1993; Bottom et al., 1999). As such, it indicates that the quality level of the characteristics on PBO has obviously been giving impact on the development of office property market, especially for investment performance.

In a global context, the determinations of the rental level on PBO have evolved through years. The rental of PBO has always been used as an indicator to define the quality level, in particular, of the PBO's space. Olayonwa et al. (2012) states that the level of space rental of a PBO demonstrates the quality level of the PBO where high quality PBO should has its mean rent greater than the average market rent and the mean rent of low quality classes. In contrast, the rental of Malaysian's PBO is still determined by a conventional valuation method involving economic factors, supply-demand, property market as well as physical aspect.

In a local context, previous research shows that the price and rental of Malaysia's PBO should be generated from the quality level of their own building characteristics. This is because PBOs are unique and have their own building characteristics and different from each other (Adnan et al., 2009). Even though there are a lot of profound variances for each of the existing characteristics of PBO in the country, nevertheless, existing characteristics are only assessed based on the quality level without detailed considerations on how they are related to rental albeit highlighting their potential significance (Safian, 2009). In other words, these studies have shown the potentially significant influence of the building characteristics quality on the level of rentals (Daud et al., 2010b; Adnan & Daud, 2008; Safian, 2009) which is yet to be investigated by an in-depth research. Hence, this justifies the need for this research to study the relationship between building and locational characteristics' quality of PBO with rental based on empirical work.

Furthermore, research on the relationship between building and locational characteristics' quality of PBO with the rental in the country is still insufficient in terms of validation on the specific characteristics of PBO. Government and private sectors as policy makers have played their vital roles in revealing the PBO's characteristics elements in order to develop a rental index of PBO and to meet the standards of new policies such as green building, sustainable building as well as

intelligent building. As a result, the characteristics of PBO have become more complex. More importantly, the increasing complexity of characteristics would entail greater needs on their influence on the rental levels of the PBO space. Nevertheless, none of the researches in the country had actually studied in detail on the influence of both the building and locational characteristics' quality on the rental levels alone in Malaysia.

The recent trends in PBO's research in Malaysia are mostly focused on criteria and building issues (Safian et al., 2011). Only a few systematic studies have been done in which it have looked into the influences of building characteristics of PBO on its rental levels in the country. In contrast, based on studies by Millhouse (2005) and Hoesli & MacGregor (2000), office building design and qualities have been found to be influencing rental. This is supported by Hoesli & MacGregor (2000), who mention that the greater the profits, the higher the price (rent) that could be paid to occupy the property. These statements have proven that property market participants who want to get higher returns from their investment should bear the higher price or rental of their PBO space. Regrettably, there is a lack of knowledge on this aspect in the country.

Previously, only one research that had been conducted in the country that puts rental as a characteristic of PBO which was done by (Adnan & Daud, 2008). However, the characteristics of PBO exploited in this country are still unsound due to the selection of rental value as the characteristic used in PBO in which it does not precisely serve the purpose. Furthermore, only the building and locational characteristics of PBO should be involved in the evaluation of the quality level of a PBO and rental cannot be one of the qualities evaluated.

Hence, based on the previous studies, a reliable measurement in determining the specific characteristics for both building and locational characteristics of PBO and their relationship with rental is needed. The main research methodology in this research involves two phases of empirical analyses for both building and locational of PBO. The building characteristics of PBO involve building quality assessment meanwhile locational characteristics of PBO is determined by Geo-information system (GIS) as a location analysis. The application of these methods will help the property market participants to decide and to ensure that appropriate profits from their investment and business activities can be attained, depending on the characteristics of PBO, whether to buy or rent.

Ultimately, as an extension to the previous research and to fill the gap of knowledge, the purpose of this research is to identify the building and locational characteristics of PBO by developing a reliable measurement in order to determine their influences on rental. This research has to be conducted to give opportunities to the property market participants to meet their needs in investment decision using a reliable tool that will also provide a better understanding in the influences of building and locational characteristics' quality of PBO with rental.

1.3 AIMS, RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

This research aims to establish the relationship between building and locational characteristics' quality of PBO with rentals, through a holistic approach that integrates and measures the building and locational characteristics of PBO. In order to achieve the aim, the following research objectives are established:

1. To identify the existing building and locational characteristics of PBO in a local context.
2. To determine a suitable measurement for building and locational characteristics' quality of PBO in Malaysia.
3. To analyse the relationship between building and locational characteristics' quality of PBO with rentals.

There are a number of building and locational characteristics of PBO that can be considered in office building assessments however the main question here is how to identify and validate the specific characteristics of PBO in the country. Moreover, a vast number of tools have been developed for office building assessments but which tools are suitable and reliable for identifying both building and locational characteristics' quality of PBO is the issue. These issues have been translated into research questions in order to identify the relationship between building and locational characteristics' quality of PBO with rentals. The research questions that will be brought forward in this research are as follows;

1. What are the existing building and locational characteristics of PBO in a local and global context?
2. What are the suitable measurements in identifying building and locational characteristics' quality of PBO?
3. What are the relationships between building and locational characteristics' quality of PBO with rentals?

1.4 SCOPE OF RESEARCH

This research is confined to purpose-built offices (PBOs) within the capital city of Kuala Lumpur due to significant impact of commercial development centre in here specifically on the development of office market and being the most urbanised region in Malaysia. The study aims to identify the relationship between building and locational characteristics' quality of PBO with rentals in certain areas within Kuala Lumpur only, which consist of Golden Triangle (GT), Central Business District (CBD), Within City Centre (WCC), and Suburban (SUB). The respondents involved are the occupants of PBO itself, whether they are tenants, office or non-office workers, as well as owners since it is perceived that occupiers in the PBO are well-informed about the condition and actual situation of their PBO performance. This research has fixed that all respondents should be occupants that have occupied the PBO for more than a year.

1.5 SIGNIFICANCE OF THE RESEARCH

Government and private sectors have been looking deep in promoting and revealing new building characteristics of PBO in Malaysia, in order to improve the office market performance. However, it is presumed that the office property market performance will drastically increase when competing with other developed countries after the relationship between building and locational characteristics' quality of PBO with rentals has been empirically studied.

The holistic design approach integrates the unique measurement of building and locational characteristics' quality of PBO with the considerations of the mutual benefit of property market participants need. It could meet the needs of property market participants if this research reveals the specific characteristics that cover

building and locational characteristics' quality of PBO and their relationship with rentals in order to facilitate their investment decisions plans.

Finally, it is targeted that with the identification of the relationship between the building and locational characteristics' quality of PBO will not only help to improve the development of Malaysia's office property market but also to uplift the development of a reliable measurement that measures the performance of the PBO from the aspects of consistency and suitability with the current price or rental of the PBO space in the country.

1.6 ORGANISATION OF THE THESIS

This research is divided into eight chapters as illustrated in Table 1.1. **Chapter One** presents the background of the study and provides an overview of the subject area of the research and outlines the research structure. The main purpose and the significance of this research are also highlighted. The main aims of the research, research questions and research objectives are also provided.

Chapter Two analyses the related concepts of building and locational characteristics of PBO. This chapter also reviews other research relating to the significance and the impact of PBO on property market in the country. All the characteristics of PBO, including both locational and building itself are also reviewed. This chapter also addresses the concept of rental on PBO. Aspects of rental on building and locational characteristics of PBO have been reviewed by the previous studies. As a result, this chapter intends to reveal the significant influences of building and locational characteristics of PBO on rental based on findings from previous studies.

Chapter Three analyses the measurement of PBO's quality. This topic is divided into two types of measurements which are for identification of building and locational characteristics of PBO in local context as well as building and locational' quality measurements. Several tools have been reviewed based on previous studies in order to identify a suitable measurement that can be applied in this research that will cover the building and locational characteristics of PBO.

Chapter Four addresses the research methodology adopted in this research, and includes an overview of all the research methods involved. These include both measurements of building and locational characteristics' quality of PBO method

which are questionnaire surveys, conducting semi-structured interviews, observing case studies, making observations, and geo-information system for locational analyses. This chapter also explains the rationale in choosing the size of samples and justifies the selection of case studies.

Chapter Five presents qualitative data analysis and findings for the development of ranking of the characteristics' quality for PBO. The purpose of this analysis is based on the selection of a minor group of experts from different fields that cover architecture, property management, valuation, building surveying as well as estate agency to give response and opinions about the ranking of characteristics for PBO via semi-structured interviews named Delphi method. The results from this chapter are also used as variables for building and locational characteristics of PBO and also as an indicator that will be used in observation survey in identifying the quality level for each chosen PBO characteristics according to local context.

Chapter Six presents quantitative data analysis and findings to identify the quality of building and locational characteristics of PBO from the occupants' perceptions as well as building observations. This is based on the improvements of existing methods which is the Building Quality Index (BQI) in identifying the quality level for building and locational characteristics of PBO. This involves analysing case studies that represent the occupants' need on the importance of building and locational characteristics of PBO based on questionnaire. Other than that, the observation is done to identify the quality level of all PBO characteristics involved where it is guided by the ranking of building and locational characteristics developed in Chapter 5. Based on the ranking, there are two observation techniques being executed which are the building inspection for building characteristics of PBO and the other is the network analysis through the GIS software application for locational characteristics. As a result, both sets of quantitative data which are from the occupants' perception and observations have been empirically analysed by BQI method which has also been shaped and modified in order to identify the quality index for building and locational characteristics of PBO.

Chapter Seven presents the research findings and analysis of the relationship between building and locational characteristics of PBO with rentals. All of the data results in Chapter 6 which are the quality index for building and locational characteristics with data regarding the rental on each sample studies are analysed

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