



**THE INFLUENCE OF OPEN SPACE ON SUB-SALE
HOUSE PRICING IN URBAN NEIGHBOURHOODS
WITHIN KLANG VALLEY**

BY

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**A thesis submitted in fulfilment of the requirement for the
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ABSTRACT

The significant expansion of housing industry in Malaysia has attracted the concern of various parties. There are increasing awareness and particular concern about the issue of green areas and open spaces as urban residents start to acknowledge the importance of urban green spaces. The research problem addresses the issue of the importance of open space being ignored due to high prices of real estate. This research aims to study the influence of open space towards house pricing in urban areas. This research also highlights discussions on past studies which provide important lessons and ideas for the research design. Three methods of data collection had been employed which are: (i) literature review; (ii) questionnaire survey; and (iii) site observations. The selected study areas were Taman Melawati, Shah Alam, Subang Jaya and Bandar Baru Bangi. The response rate was 100% with a total respondent of 200. The reliability test was conducted and the results of Cronbach's alpha value for green areas and its independent variables was 0.895 thus considered acceptable and allowed the research to retain all variables for the analysis. This research found that the consideration of open space in increasing house prices has positive influence towards the determination of housing prices ($r_s = .091$). However, the relationship is weaker compared to other macro and micro factors. The most desirable element of open space is cleanliness (RI = 0.894) while the least desirable element is hierarchy of open space (RI = 0.783), showing that users prefer elements which they can physically observe. Theoretically, the findings of this research are in line with the theories suggested by other literature. The result, as perceived by the respondents, reflects preference for physical and economic factors compared to environmental factor. Based on the findings, the researcher recommends key parties in housing industry to consider open space as an essential factor in determining house prices as well as providing regular maintenance and premium facilities for open spaces within residential areas. As a conclusion, this research has met its outlined objectives and proves that there is a weak positive relationship between open space and house pricing.

خلاصة البحث

تطور قطاع الإسكان في ماليزيا بشكل ملحوظ قد لفت انتباه الأطراف المختلفة في هذه الأيام. فهناك الوعي المتزايد والاهتمام الخاص بقضية المناطق الخضراء والمساحات المكشوفة، كما بدأ يعترف سكان المدن بأهمية المناطق الخضراء بالمدينة، تتمثل مشكلة البحث قضية تجاهل أهمية المساحات المكشوفة جزاء الثمن الباهظ في عقارات المدن. وتم استعراض الدراسات السابقة للجوانب المهمة في المساحات المكشوفة، وتجارة العقارات، وتسعير الإسكان، والتقييم العقاري وعوامل تسعير الإسكان. تسلط الدراسة الضوء على مناقشات الدراسات السابقة والتي تبرز الأفكار والمقترحات المهمة في تصميم البحث. وتعتمد الدراسة على ثلاثة مناهج لجمع المعلومات وهي: (١) الدراسات السابقة؛ (٢) الاستبانات؛ (٣) الترصديات الميدانية. ومن ثم، تم اختيار تامن ملاوتي، شاه عالم، سوبانج جايا وبندر بارو بانجي كميادين الدراسة المختارة. وكان معدل الاستجابة ١٠٠% من ٢٠٠ مستجيب. وتم اختيار الاعتمادية وكانت قيمة ألفا كرونباخ (cronbach's alpha value) للمناطق الخضراء والمتغيرات المستقلة عي ٠,٨٩٥، وتعد مقبولة وبالتالي تؤكد على احتفاظ كل المتغيرات للتحليل. واكتشفت الدراسة أن النظر في المساحات المكشوفة في ارتفاع سعر الإسكان له تأثير إيجابي تجاه تحديد سعر الإسكان ($rs=0.091$) ولكن العلاقة ضعيفة مقارنة مع العوامل الكلية والجزئية الأخرى. أما العنصر المرغوب في المساحات المكشوفة فهو النظافة ($RI=0.894$) والعنصر الأقل رغبة هو مرمية المساحات المكشوفة ($RI = 0.783$). وتشير هذه النتائج إلى أن المقومين يفضلون العناصر الملموسة. وكانت النتائج متمشية مع النظريات المقترحة في الدراسات السابقة نظريا. فالنتائج من منظور المقيمين، تعكس تفضيل العاملين الفيزيائي والاقتصادي على العامل البيئي. وفي ضوء النتائج السابقة، يوصي الباحث بالآتي: يجب على الأطراف الرئيسية في قطاع الإسكان عد المساحات المكشوفة عاملاً رئيسياً في تحديد سعر الإسكان، بالإضافة إلى توفير الصيانة الدورية والتسهيلات المتميزة للمساحات المكشوفة في المناطق السكنية. وختاماً، تحقق الدراسة أهدافها وتثبت أن هناك علاقة إيجابية ضعيفة بين المساحات المكشوفة وتسعير الإسكان.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Science (Built Environment).

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The significant expansion experienced by the housing market in Malaysia, particularly within its urban areas over the past fifteen years has attracted the concern of political leaders, economists, town planners and governments over the years (Shah Rizal, 2013). At the same time, urban development has long opposed the protection of natural environment in big cities such as New York, London, Jakarta and particularly Kuala Lumpur, Malaysia (Jones & Watkins, 2009). The existence of urban green areas have been confirmed to improve the quality of life of particular neighbourhoods (Bedimo-Rung et al., 2005; Heinze, 2011; Bell et al., 2008) and reduce the negative effects surrounding the neighbourhood (Irwin, 2002). The continuous loss of green areas is an alarming issue that needs concern from all over the world especially for residents living in urban areas as the global population of urban areas now exceeds 50% and is expected to rise to 67% in the next 50 years (Grimm et al., 2008; DelSol et al., 2011). Thus, the consideration of green areas is deemed important as its aspects are tightly interconnected with urban health matters and quality of life, which could affect humans ecologically, economically and socially (Klemm, 2007). Presently there is an increasing awareness and particular concern on the issues of green areas and open spaces among urban populations in Malaysia as local communities start to acknowledge the vital importance of green areas within their surroundings. At the same time, there are, in fact, a number of ongoing policies and efforts by the Malaysian government to achieve the global standard of providing adequate public open spaces for urban residents, which includes the target of achieving 2 hectares per 1,000 urban population under the

National Urbanization Policy (2006). In addition, the issue of provision of open spaces is important within Malaysian urban planning implementation policies, as it is formally associated with the requirements for proposal and development plans under current practice. Despite significant awareness and efforts, the issue of loss of open spaces to pave the way for other developments has continued to occur within Klang Valley over the years. It is discovered that the percentage of green cover in Kuala Lumpur has decreased from 76.62% in the year 1990 to only 23.33% in 2009 (Mohd Nasrul Hanis, 2012), while the housing developments in Kuala Lumpur between the years 1980 and 2000 have increased by approximately 10,000 additional units per annum (Kuala Lumpur Structure Plan 2000). This situation raises the question on the importance of green areas and open spaces towards the housing industry within Klang Valley. As Ekins (2000) suggested, economic arguments can help to make decisions regarding the trade-off between built-up development and the preservation of natural environment provided that both elements are adequately quantified; the importance of open spaces can be considered as one of the economic factors that influence the housing market and pricing. In addition, the relationship between open space and house price does exist as house prices can be influenced positively or negatively by the availability of open spaces among other infrastructures and amenities (Weicher and Zerbst, 1973; Anderson and Cordell, 1988; Mahan et al., 2000; Morancho, 2003). Based on this, this research aims to investigate the influence of open spaces towards house pricing in urban areas within Klang Valley among other relevant factors. In order to achieve the aim, this study focuses on quantitative data from literature reviews and recorded information supported by data obtained from selected respondents within selected study areas.

1.2 STATEMENT OF THE PROBLEM

The government of Malaysia has the vision of achieving the status of “Garden Nation” by the year 2020 as it works towards the desired development in enhancing economic needs as well as maintaining a balanced conservation of natural resources in an effort to be sustainable (National Urbanization Policy, 2006; 10th Malaysia Plan, 2010). Despite the efforts and policies by the Malaysian government, the current progress presents a reality far from the desired objective. The allocation of 6.52% coverage of gazetted open spaces under the Kuala Lumpur Structure Plan 2020 only translates to 0.36 hectare per 1,000 population, which is far below the target of 2 hectares per 1,000 urban population, thus resulting with urban areas within Klang Valley facing a shortage of open space.

The importance of open space within residential areas has been largely ignored due to the high price of real estate (Jamil, 2002) as developers and house vendors capitalise on high housing demand while negating the quality of life, resulting in detrimental effects to the quality of life (Ghazali, 1999; KL City Plan 2020, 2009; Vaghefi et al., 2015). Thus, housing developers need to concentrate their efforts and concerns on providing a greener lifestyle for the residents as houses with green space and good environmental quality also has the potential to be high in value (Morales, 1980; Anderson and Cordell, 1988; Irwin, 2002; Aluko, 2011; Atasya et al., 2015).

Although it is noticeable that the provision of open spaces within the residential areas is important for housing developments within Klang Valley, most studies related to house pricing in Malaysia tend to show less concern on the provision of open spaces compared to other factors such as structural, locational and neighbourhood attributes (Chin et al., 2004; Lee and Hui, 2012).

It is noted that the government's goals to provide adequate open space and improve the residents' quality of life may be difficult to achieve if the influence of open spaces towards house pricing continue to decrease. This possibility therefore brings about the need to investigate the influence of open spaces towards house pricing in urban areas. At the same time, the question of whether the existence of open spaces is a strong indicator in the determination of house pricing compared to other related factors also needs to be answered. Thus, this research aspires to explore the desirable elements of open spaces and the importance of open spaces among other macro and micro factors that influence sub-sale house pricing in selected study areas. To do this, the researcher will carry out appropriate survey method and analysis techniques to discover the relationship between open space and house pricing, as well as proposing appropriate recommendations on the subject matter.

1.3 RESEARCH QUESTIONS

The statement of problem leads to the following research questions which are:

- i. How can open space influence house pricing in urban areas?
- ii. What is the most desirable element of open space that affects house pricing?
- iii. What is the importance of open space in influencing house pricing compared to other macro and micro factors?
- iv. What are the recommendations that can be proposed based on the findings of this research?

1.4 RESEARCH AIM

The aim of this research is to investigate the influence of open space towards house pricing in urban residential areas within Klang Valley among other relevant factors, understanding the desirable elements of open space as perceived by residents

1.5 RESEARCH OBJECTIVES

Research objectives have been formulated to guide the researcher towards the completion of this study. The research objectives are as follows:

- i. To study the influences of open spaces towards house pricing within urban areas.
- ii. To determine the most desirable element of open space on house pricing.
- iii. To investigate the importance of open space on house pricing compared to other macro and micro factors.
- iv. To propose recommendations based on the findings of the research.

The relationships between research questions and formulated research objectives are shown in Figure 1.1.

RESEARCH QUESTIONS

How can open space influence house pricing in urban areas?



RESEARCH OBJECTIVES

To study the influences of open spaces towards house pricing within urban areas.

What is the most desirable element of open space that affects the house pricing?



To determine the most desirable element of open space on house pricing.

What is the importance of open space in influencing house pricing compared to other macro and micro factors?



To investigate the importance of open space on house pricing compared to other macro and micro factors.

What are the relevant recommendations which can be proposed based on the findings of this research?



To propose recommendations based on the findings of the research.

Figure 1.1 Research Objectives Correspond to Research Questions

1.6 SCOPES OF STUDY

This research was conducted to study the influence of open space towards house pricing in urban residential areas within Klang Valley. It therefore focuses on two main aspects, which are open spaces and house pricing. This includes the understanding and importance of green areas, how open spaces influence the trends of house pricing, desirable elements of open spaces, house pricing mechanisms, the housing market within the study areas, and other macro and micro factors that influence house pricing. In order to do this, the study involves discussions from literature reviews and recorded information on open spaces and the housing market supported by data obtained from respondents through surveys. As for respondents, 200 current owners of 2-storey terraced houses who reside within the selected study areas have been chosen to participate in the survey. The areas chosen in this research are Taman Melawati, Subang Jaya, Shah Alam and Bandar Baru Bangi. Taman Melawati is located in Kuala Lumpur while Subang Jaya, Shah Alam and Bandar Baru Bangi are located in the state of Selangor. 5 survey parcels have been defined within each study area, which total up to 20 survey parcels. This is done to ease the enumerators in conducting the surveys. The surveys have been done in March 2014.

The results obtained from the surveys have been analysed through three analysis techniques which include descriptive analysis, relative importance index (RII) and Pearson correlation. Based on the results, the research then focuses on studying the desirable elements of open spaces and the importance of open space among other macro and micro factors in order to obtain research findings. The findings are then elaborated, supported by the understanding derived from literature reviews and site observations. Relevant recommendations are then proposed based on the synthesized findings of the

research. The elements of subject matter which are covered under the scopes of study for this research are presented in Table 1.1.

Table 1.1 The Main Subject Matter and their Elements

Open Space	House Pricing
<ul style="list-style-type: none"> • Definition of green areas and open spaces • Importance of open spaces • Significance of open spaces on house pricing • Elements and attributes of open space 	<ul style="list-style-type: none"> • Housing market in Malaysia • House price trends and mechanisms • Macro factors that influence house pricing • Micro factors that influence house pricing

1.7 SIGNIFICANCE OF RESEARCH

The research discusses the influence of open space towards house pricing within urban areas and the related literature reviews which includes the understanding on green areas and open spaces, property valuation in Malaysia, the housing market, house pricing and its factors.

1.7.1 Supporting National Policies and Guidelines on Open Spaces

There are a number of policies & guidelines published by the government on the issue of green areas and open spaces as well as specific measures and plans to achieve the target. As several parts of this research involves discussions on the said policies and guidelines on open spaces, it provides an insight on the current reality and progress of the efforts done by the government. Thus the findings from this research have the potential to be utilized for improving plans and strategies in achieving goals defined by the policies as well as encouraging relevant parties to adhere the guidelines.

1.7.2 Encouraging Awareness of Open Space

Many studies have been undertaken regarding the benefits of green areas and open spaces. This research not only elaborates the discussions on the importance and benefits of the open space but also illustrates how open space is perceived from the economic perspective. Thus, the discussions and findings in this research have the strength to encourage parties related to the issue, such as developers, real estate agents, environmentalists, stakeholders and members of the public, to be aware of the current situation of open space and help in making decisions involving open spaces.

1.7.3 Providing Reference for Key Parties in Housing Developments

There are a number of key parties in the housing development industry, such as housing developers, town planners, landscape planners and estate agents, who will benefit from this research as it provides discussions and findings on housing market trends and the significance of open spaces towards determining house pricing. The findings of this research can be considered as a reference for planning the provision of open space for future housing developments as well as determining house prices for new housing developments and houses within sub-market properties.

1.7.4 Contributing to the Knowledge in Built Environment Field

This research also plays its part in contributing to the enhancement of knowledge in the field of built environment as it involves discussions pertaining to housing, an important component in the field. Further, this research's attempt to establish the relationship between the built environment (housing) and natural environment (open space) has the possibility to provide significant ideas for fellow researchers and practitioners involved in this field.