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STUDY OF THE FACTORS DETERMINING RESIDENTIAL LOCATION OF IIUM EMPLOYEES OF THE GOMBAK CAMPUS, MALAYSIA

BY

MOOTAZ MUNJID MUSTAFA

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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A STUDY OF THE FACTORS DETERMINING RESIDENTIAL LOCATION OF IIUM EMPLOYEES OF THE GOMBAK CAMPUS, MALAYSIA

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ABSTRACT

Mainstream residential location theories and models mainly consider the three factors of friction or distance from the work place, rent and house size as factors determining residential location. Although there are certain truths about such assumptions, it is clear that there may be other factors influencing residential location decision making. This research attempted to identify the array of factors and the extent to which they influence residential location of households. The scope of the research is narrowed down to employees of the International Islamic University Malaysia. The findings of the research illustrated the importance of the commuting costs in determining residential location. Rents on the other hand were found to have no influence on the residential location of respondents. Examining other variables for their impact on residential location brought forwards three additional factors: the location of the workplace of the spouse, home ownership and the respondents' duration of service at the current workplace. These factors are not taken into consideration in any of the land use structure models discussed earlier in the research but were found to have an influence on residential location choice of households.

ملخص البحث

تعتبر أهم نظريات الإسكان وأكثرها شيوعاً ثلاثة عوامل متمثلة في تكلفة النقل، وتكلفة إيجار المسكن، ومساحة المسكن كالعوامل الثلاثة الوحيدة التي تحدد اختيار موقع المسكن لدى الأفراد. وعلى الرغم من عدم خلو تلك النظريات من الصحة، فإن من الواضح أن هناك عناصر إضافية أخرى تساهم في، وتؤثر على اختيار موقع المسكن بالنسبة للأفراد. حاول هذا البعث عن طريق دراسة ميدانية، التعرف على مثل تلك العناصر الإضافية ومدى تأثيرها على عملية اختيار موقع المسكن لدى موضفي الجامعة الإسلامية العالمية بماليزيا والتي مثّل موضفوها مجتمع البحث. أظهرت نتائج البحث أهمية تكلفة النقل في عملية اختيار موقع المسكن لدى الموضفين، أما تكلفة استئجار المسكن فلم يكن لها أي تأثير على عملية الاختيار ذاتها. كما أشارت نتائج البحث إلى أهمية ثلاثة عناصر إضافية لها الدور المؤثر في عملية اختيار موقع المسكن لدى عينة البحث، وكانت تلك العناصر هي موقع عمل الزوجة، وملكية المنزل الذي يسكنه مالئ الاستبيان حالياً، ومدة الخدمة في مكان العمل الحالي أي في الجامعة الإسلامية العالمية ماليزيا. ومن الجدير بالذكر هو أن جميع العناصر الثلاثة لا تؤخذ في الحسبان في نظريات السكن المعنية بهذا المجال، في حين أثبت هذا البحث أهميتها وتأثيرها على اتخاذ قرار اختيار موقع السكن لدى موضفي الجامعة.

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 dissertation for the degree of Master of Urban and Regional Planning.

.....
Mohammad Abdul Mohit
Supervisor

I certify that I have 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 dissertation for the degree of Master of Urban and Regional Planning.

.....
Abdul Azeez Kadar Hamsa
Examiner

This dissertation was submitted to the Department of Islamic Law and is accepted as a partial fulfilment of the requirements for the degree of Master Urban and Regional Planning

.....
Zainora Bt. Haji Asmawi
Head,
Department of Urban &
Regional Planning

This dissertation was submitted to the Kulliyyah of Architecture and Environmental Design and is acceptable as partial fulfillment of the requirements for the degree of Master of Urban and Regional Planning

.....
Mansor Bin Ibrahim
Dean, Kulliyyah of
Architecture and
Environmental Design

DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references and a bibliography is appended.

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Signature ……. Date……..

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TABLE OF CONTENTS

Abstract ii
Abstract in Arabic iii
Approval Page iv
Declaration v
Copyright vi
Acknowledgments vii
Table of Contents viii
List of Tables x
List of Figures xii
List of Maps xii

CHAPTER ONE: INTRODUCTION 1
1.1 Introduction 1
1.2 Problem statement 2
1.3 Objectives of the study 2
1.4 Research questions 3
1.5 Scope of study 3
1.6 Significance of the study 4
1.7 Organization of the study 5
1.8 Limitations of the study 6

CHAPTER TWO: LITERATURE REVIEW 7
2.1 Introduction 7
2.2 Approaches of studying the urban land use structure 7
2.3 Descriptive land use models 10
2.3.1 Urban ecology and the origins of residential location models 10
2.3.2 Other descriptive land use models 15
2.4 Land economy and residential location: a counter approach 18
2.4.1 An economic basis for competition: the housing price model 22
2.4.2 The access-space trade-off model 26
2.5 Conclusion 30

CHAPTER THREE: THE STUDY AREA 33
3.1 Introduction 33
3.2 The State of Selangor 33
3.3 The District of Gombak 34
3.4 The Mukim of Setapak 34
3.5 The International Islamic University Malaysia 37
3.6 A justification of the selection of the IIUM employees as the case study 38
3.7 Conclusion 40

CHAPTER FOUR: STUDY METHODOLOGY 41
4.1 Introduction.....41
4.2 Phases of the research process 41
4.3 The sampling frame 44
4.3.1 IIUM employees.....44
4.3.2 Determining the sample size 45
4.3.3 Administering the questionnaire survey.....46
4.4 Formulation of the questionnaire survey 47
4.5 Data analysis 48
4.6 Conclusion 49

CHAPTER FIVE: FINDINGS AND DATA ANALYSIS.....50
5.1 Introduction.....50
5.2 Respondents' background.....51
5.2.1 Number and employment category of respondents.....51
5.2.2 Respondents' kulliyyah/unit/division 51
5.2.3 Respondents' gender and employment categories.....52
5.2.4 Respondents' age 53
5.3 The residential location pattern of IIUM employees of the Gombak campus.....54
5.3.1 Distance between respondent's place of residence and IIUM 54
5.3.2 Commute time to and from IIUM 58
5.3.3 Expenditure on the daily commute to IIUM 59
5.3.4 Respondents' mode of transportation to work 62
5.4 Socioeconomic characteristics and their influence on residential location.....67
5.4.1 Respondents' level of education 67
5.4.2 Respondents' marital status.....68
5.4.3 Length of service at IIUM.....69
5.4.4 Respondents' gross monthly income.....74
5.4.5 Respondents' type of employment within the household 75
5.5 Housing characteristics and their influence on residential location.....79
5.5.1 Respondents' home ownership.....79
5.5.2 Respondents' type of housing unit.....85
5.5.3 Respondents' expenditure on housing.....88
5.5.4 Duration of occupancy of the current home 93
5.6 Travel characteristics and their influence on the residential location.....96
5.6.1 Distance between place of residence and workplace in a multiple employment household.....96
5.6.2 Distance between the respondents' residence and children's school 99
5.7 Stepwise regression.....102
5.7.1 A general stepwise regression analysis 103
5.7.2 An employment-category based stepwise regression analysis.....106
5.8 Conclusion 110

CHAPTER SIX: SUMMARY AND CONCLUSIONS.....111
6.1 Introduction.....111
6.2 Summary of the research findings 111
6.2.1 Respondents' socioeconomic characteristics and their influence.....114
6.2.2 Housing characteristics and their influence on residential location 115

6.2.3 Travel characteristics and their influence on residential location 115
6.3 Recommendations 117
6.4 Areas of future research 118
6.5 Conclusion 118

BIBLIOGRAPHY 120

APPENDICES 123

LIST OF TABLES

Table No.		page
4.1	The number and categories of IIUM employees as of December 2006	45
4.2	Respondent's employment category	47
5.1	Respondent's employment category	51
5.2	Respondent's Kulliyyah/Unit/Division	52
5.3	Crosstabulation between respondent's gender and employment category	53
5.4	Crosstabulation between respondents' age and employment category	54
5.5	Crosstabulation of the distance between respondents' workplace (IIUM) and place of residence based on employment category	57
5.6	The standard deviation and the mean distance between respondents' place of residence and IIUM based on employment category	57
5.7	Crosstabulation between the Distance between respondents' place of residence and IIUM, based on employment category and type	58
5.8	Time taken (in minutes) by the respondents for the commute to IIUM, based on employment category	59
5.9	Time taken (in minutes) by the respondents for the commute to place of residence, based on employment category	59
5.10	Crosstabulation between the expenditure on commuting as a percentage of the respondents' income and employment category	61
5.11	Expenditure on commuting as a percentage of the respondents' income based on income groups	62
5.12	Crosstabulation between the mode of transport used by respondents and employment category	63
5.13	Crosstabulation between the mode of transport used by respondents and gross monthly income	64
5.14	Crosstabulation between Respondents' highest level of academic achievement and employment category	67
5.15	Crosstabulation between respondent's marital status and employment	69
5.16	A crosstabulation between length of service in IIUM and employment	71
5.17	Crosstabulation between respondents' gross monthly income and employment category	74
5.18	Crosstabulation between respondents' type of employment and employment category	76
5.19	Summary of respondents' demographic and socio-economic characteristics	78
5.20	Crosstabulation between respondents' home ownership and employment category	80
5.21	The standard deviation and the mean distance between respondents' place of residence and IIUM based on homeownership	81
5.22	Crosstabulation between Respondent's employment category and type of house	84

Table No.		page
5.23	Crosstabulation between respondent's combined household income and type of house	85
5.24	Respondent's mode of expenditure on housing	89
5.25	Respondent's household expenditure on housing as a percentage of the combined household income	90
5.26	Respondent's household mean/median expenditure on housing as a percentage of the combined household income	90
5.27	Crosstabulation between payment of a housing loan and respondents' means of home ownership	91
5.28	Expenditure on housing as a percentage of the combined household income (n=77)	92
5.29	Approximate duration of the bank loan (Years) (n=41)	92
5.30	Crosstabulation between respondents' house value and employment category	93
5.31	Crosstabulation between respondents' duration of residence in the current home and employment category	94
5.32	Respondent's mean and median duration of occupancy of current home (Years)	95
5.33	Summary of respondents' housing characteristics	95
5.34	Crosstabulation between the number of employments in respondents' households and employment category	97
5.35	Distance between place of residence and primary/secondary employment (n=75)	99
5.36	Crosstabulation between respondent's employment category and number of schools children attend (n = 74)	100
5.37	Crosstabulation between the distance to IIUM and to the first children's school	101
5.38	The gradually increasing distance and diminishing tendency of the children's schools to influence a household's residential location	101
5.39	Summary of respondents' transport and commute characteristics	102
5.40	Predictor variables Entered/Removed in the regression model	105
5.41	Stepwise regression model Summary	105
5.42	Stepwise regression model coefficients	105
5.43	Predictor variables Entered/Removed in the regression model based on respondents' employment category	108
5.44	Stepwise regression model Summary based on respondents' employment category	109
5.45	Stepwise regression model coefficients for academic respondents	109
5.46	Stepwise regression model coefficients for non-academic respondents	109

LIST OF FIGURES

Figure No.		page
2.1	The successive concentric land use rings	12
2.2	Hoyt's sector model	16
2.3	The Multiple Nuclei Model	17
2.4	Bid-rent curves as a basis for urban land use formulation	20
2.5	Land price vs. distance from CBD, x1+y1=x2+y2 for all locations	23
2.6	The Access and Space pulls and residential location	27
4.1	Phases of the research process	43

LIST OF MAPS

Map No.		page
3.1	The state of Selangor, the district of Gombak, and the International Islamic University	34
3.2	IIUM Gombak campus, the red boundary demarcates the 230-acre administrative and academic core of the university.	38
5.1	Residential location pattern of academic employees	65
5.2	Residential location pattern of non-academic employees	66
5.3	Residential location of respondents employed for less than 9 years	72
5.4	Residential location of respondents employed for more than 9 years	73
5.5	Residential location pattern of homeowners	82
5.6	Residential location pattern of renters	83
5.7	A variety of housing developments around the IIUM campus	87

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The future urban structure of cities throughout the world is likely to be influenced by the pattern of the residential land use which occupies a major proportion of its total urban land use (Kaiser, 1995). Therefore, a study of the factors determining urban land use through the residential location choice of individual households whose members are employed in city centers or employment nodes generally appears to be important in determining the future physical form or urban spatial structure of cities. Studies on the residential aspects in Malaysia are mostly focused on land use and housing. However, there is a lack in systematic attempts made to look at the locational aspect of residences or housing.

On the other hand, studies on residential location choice elsewhere mainly consider the two factors of friction or distance from the work place, and rent (Alonso, 1964; Muth, 1969). Others include the variable or factor of the size of the housing unit as a determining factor of residential location as manifested in the access-space trade-off model. In both cases however, modern location theories cast the economic behavior of households in a competitive neo-classical context, with the consumer being viewed as a utility maximizing price taker (Maclennan, 1982). Although there are certain truths about such assumptions, it is clear that there may be other factors influencing residential location decision making. The degree to which residence location is driven by workplace location or the converse may also vary by household relationship, tenure, ethnicity and socioeconomic status (Waddell, 1997). This

research will attempt to identify the array of factors and the extent to which they influence residential location of households. However, the scope of the research is narrowed down to employees in the institutional sector. The employees of the International Islamic University Malaysia (Gombak) are the case study for the research.

1.2 PROBLEM STATEMENT

Existing studies on residential location have many limitations as they usually consider rent, commuting costs and the desire for space as the sole determinants of residential locations. Neither the access-space nor the filtering models (which represent the dominant paradigm of land use structure research) are always appropriate frameworks for the applied economic analysis of housing choices. Furthermore, established location theories are severely limited by the difficulty in quantifying or even identifying certain factors that can potentially influence residential location (Maclennan 1982). Such factors may include the distribution of urban services (which is always assumed to be even), the intangible social values of individuals, the socioeconomic status of households, ethnicity and others.

1.3 OBJECTIVES OF THE STUDY

1. To identify factors determining residential location of households in general.
2. To study the existing residential location pattern of the employees of IIUM Gombak.

3. To determine the nature and the significance of the relationships between the identified factors and residential location of IIUM employees of the Gombak campus.

1.4 RESEARCH QUESTIONS

The research aims to answer the following questions:

1. What is the existing residential location pattern of the employees of IIUM?
2. What are the demographic and socioeconomic attributes of the sampled households?
3. What is the expenditure pattern of the sampled households on housing?
4. What are the transportation parameters affecting the sampled households residential location?
5. What are the factors, and to what extent do they determine the residential location of the sampled households?

1.5 SCOPE OF STUDY

1. Plotting the residential location pattern of the employees with reference to the IIUM, Gombak campus by using GIS maps.
2. Determining the tenure type, and the expenditure on housing as a percentage of the monthly income of the employees.
3. Identifying and studying the following transportation parameters with reference to the employees:
    - Travel time between place of residence and IIUM;
    - Travel distance from place of residence to IIUM;

- Transportation mode used;
- Total monthly commuting costs; and
- Total monthly non-commuting costs.

4. Identifying the following socioeconomic indicators of the employees:
   - Monthly household income;
   - Age of household head;
   - Household size; and
   - Number of school-going children.
5. Studying the nature and significance of the relationship between the identified factors and the residential location of the sampled employees.
6. Formulation of regression equations for the purpose of predicting the residential location pattern of the IIUM employees based on the most influential factors.

1.6 SIGNIFICANCE OF THE STUDY

Existing knowledge on residential location is focused on a few determining factors due to the difficulty in identifying and incorporating certain factors that has the potential to influence residential location. The present research will attempt to analyze residential location by the covering more dimensions which are currently lacking in the existing studies. Therefore, it is expected that the research will shed some light on the field of residential location, and hopefully provide a small scale starting point for further empirical research on the subject.

The outcome of the research will help in the formulation of land use, housing and infrastructure policies by public agencies. It will help state government in determining locations for future housing projects. Private housing developers will also

benefit from the policies in locating their future housing projects. The study may also benefit those interested in studying and formulating hedonic house pricing models.

1.7 ORGANIZATION OF THE STUDY

This study will be comprised of six chapters. The first chapter will mainly discuss the significance, the objectives and the scope of the study and above all the problem statement.

The second chapter will be a literature review that is comprised of two parts. The first part provides a rudimentary background to the approaches commonly used in analyzing and studying urban land use structure. The second, on the other hand, would cover some of the mainstream approaches mentioned in the first part. Each approach will be discussed individually in some detail in terms of its underlying concepts, applications and limitations. The focus of the discussion of the approaches would be on their bearing on the residential land use and its location in relation to the other urban land uses. The main aim of this chapter is to provide an extract of the likely factors determining residential location based on the discussed literature.

The third chapter will focus on introducing the study area and its regional context. The chapter will commence by introducing the state of Selangor and its districts and will proceed to the particular Mukim that houses the study area of the International Islamic University Malaysia.

The fourth chapter will present the study methodology the researcher followed in order to achieve the objectives of the study. This chapter will mainly touch on four areas that are the phases through which the study evolved, the sampling frame, the formulation of the questionnaire and the methods of data collection and analysis.

The fifth chapter constitutes the main body of the research. Primary data collected through the self-administered questionnaire survey is analyzed and examined based on the literature review and the secondary data collected earlier. The analysis of each variable in this chapter will be in two parts; the first laying out a summary of the data and highlighting the importance of each variable to the overall research aim, and the second will be concerned with the influence the variable or factor has on the residential location of the respondents.

The sixth and final chapter will provide a summary of the main findings of the study, recommendations and suggested areas for future research in the field of factors determining residential location and urban land use structure in general.

1.8 LIMITATIONS OF THE STUDY

An important limitation of this study is due to its limited application potential, as findings of the study can only be helpful in understanding residential location patterns of employees in the institutional sector and particularly in institutes of higher learning such as universities. Factors determining residential location of employees in other job providing sectors such as the services, manufacturing and agriculture are likely to be different. In addition, the lack of empirical studies carried out on the subject of residential location represents another limitation to the study.

Yet another limitation of the study is the small number of the sampled employees or the sample size, this limitation could not be avoided due to the limited resources and time allocated for the completion of the research, however, the accuracy of the findings could be enhanced with the selection of a larger sample.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This literature review is comprised of three parts. The first part provides a rudimentary background to the approaches commonly used in analyzing and studying urban land use structure. The second on the other hand would cover some of the mainstream approaches mentioned in the first part. Each approach will be discussed individually in some detail in terms of its underlying concepts, applications and limitations. The focus of the discussion of the approaches would be on their bearing on the residential land use and its location in relation to the other urban land uses. Finally, a conclusion will provide a summary and an extract of the likely factors affecting residential location in an urban context based on the discussed literature.

2.2 APPROACHES OF STUDYING THE URBAN LAND USE STRUCTURE

The range of studies covered by the simple phrase "urban land use" is vast in the extreme and includes contributions from all the disciplines which conventionally fall within the social sciences (Carter 1974). It has even been argued that spatial locations of a city's land use structure can often be traced back to concepts that were essentially aspatial i.e. social. Carter H. in his book "*The Study of Urban Geography*" sited an interesting example of how a purely social concept (the concept of social distance) could readily relate to a spatial or locational factor in an urban context.

The concept of 'Social Distance' –which is thought to be a purely sociological concept-, is defined as 'an attitude of ego towards a person with a particular status

attribute'. One such attribute that can apply here is the 'occupation' of the person. The occupation of two different people does determine in most instances the social distance between them, this intangible distance separating the two is believed to translate into physical distance when it comes to the selection of a residential site, and hence an aspatial sociological concept becomes a spatial locational determinant. Consequently, it was realized by early researchers into the urban spatial structure that the urban land use pattern is the consequence of a large number of operative forces and that most generalizations attempt to ignore many of them (Carter 1974) in order to formulate a somewhat understandable model of the urban land use pattern prevalent and applicable to cities world wide.

It follows that economists and planners have long been aware that there were apparently systematic patterns of housing and land uses within and around urban centers (Maclennan 1982). However, up to a certain point in time many scholars in the field maintained that the pattern and location of the residential land use depended purely on social factors that had no direct relation to the economic forces that shape the existence of other land uses:

> *"The basis of residence values is social and not economic –although land goes to the highest bidder- the rich selecting the locations which please them, those of moderate means living as nearby as possible, and so on down the scale of wealth."* (Romanos 1976)

This indicates the relatively simplified outlook or stance researchers took with respect to housing and the space it occupies within the urban domain.

This changed however with the emergence of a sub-discipline of economics now known as "urban economics", as within this newly established field developed a model of the residential structure of the city. This new approach emphasized the

importance of economic variables and the urban land market. Thus the theory of urban land use became an essential part of land economics (Carter 1974).

Contrary to the sociological approach which derived or drew conclusion as to the nature of the urban structure in a normative manner through Land use maps of existing cities –initially those of the city of Chicago-, individual land uses were analyzed based on their unique features within an economic framework so that the total land use of a city was seen as the consequence of a very large number of separate activity systems, each having individual characteristics. What was common between the activity systems or the competitors for urban land was the profound desire to maximize profits or utility of a location (Mills 1994, Waddell 1997).

From the above it can be deduced that the vast majority of scholarly attempts made to understand residential location within the urban context had to belong to one of the two mainstream approaches:

1. The sociological approach of urban ecology supported by the pioneering large scale normative studies concerning the social ecological structure of cities undertaken in the city of Chicago; and
2. The approach of urban economists who stressed on the influence economic operations had on housing, residential location and other land markets.

Although in essence these two approaches ran contradictory to one another, there was something of a common ground in the belief that there certainly was an inherently systematic nature in which land was allocated for housing alongside other land uses. The way each approach perceived the housing market and residential choice will be discussed in the next part of this literature review.

2.3 DESCRIPTIVE LAND USE MODELS

It is important to mention at this juncture that the sociological approach of urban ecology belonged to the family of descriptive urban land use models (Haque and Mamun 2006, and Campbell, Jr. 1998). These models were developed to generalize about the pattern of urban land use found in early industrial cities of the United States. Other descriptive urban land use models that will be discussed briefly in this literature review are the Sector model introduced by Homer Hoyt as a more realistic version of the concentric zone model, and the Multiple Nuclei Model of Chauncy Harris and Edward Ullman.

The approach of urban economics on the other hand is part of a process-based group of land use models (Haque and Mamun 2006). Unlike descriptive models, they do not draw conclusions about land use patterns from observing existing cities; instead they attempt to discover the forces that caused urban centers to look the way they do. Needless to say, economics was believed to be a prime force dictating urban land use patterns.

2.3.1 Urban ecology and the sociological origins of residential location models

Early studies undertaken by the proponents of the Chicago school of social ecology contributed a great deal in forming a basis for understanding urban structure and land use patterns. The work of scholars such as Robert E. Park (1864-1944) and Ernest W. Burgess (1886-1966) emphasized two important facts; the first was that cities did in fact have a systematic residential structure, and the second was that this structure can be comprehended and explained in terms of two major processes: “Competition” and “Invasion with succession”.