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Land Use Planning and Property Development: Factors Affecting Urban Housing Development in Kuala Lumpur, Malaysia

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Abstract

Various literatures on land use planning unveil diverse negative effects on property development, particularly on urban housing supply. The effects can be categorized into location, quantity, intensity and production costs which then lead to an increasing mismatch between housing supply and demand. The Malaysian planning system has partly contributed to housing problems in urban areas. The purpose of this paper is to examine planning factors affecting urban housing development in the capital city of Kuala Lumpur within the established institutional framework. The study encompasses planning approval process, legislative provisions and planning decisions. Primary data were gathered through questionnaire surveys to private housing developers and in-depth interviews with local planning authority. The findings demonstrate the influence of planning decisions over implementation of land use planning policies.

Key words: Land-use planning, planning system, property development, urban housing, planning decisions, Institutions.

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1.0 Introduction

Studies in developed countries such as in the UK and USA reveals that the practices of town planning affected land development in various ways, and partly contributed to the increase of land prices and housing prices and quantity (Hall 1973; Barlow, 1993; Bramley, 1998; Healey, 1991; Harvey, 2000; Adams and Watkins, 2002; Evans, 2004). Acknowledging these effects, town planners and decision makers should consider the possible impact of planning on housing development, and adapt town planning practices towards achieving desired outcomes.

Initially, town planning mainly intended to guide the development of towns and cities through the use of simple land-use maps; later, these maps developed into comprehensive town plans illustrating infrastructures, intensity of uses and land use zoning (Taylor, 2006). Differences in the site conditions and local topography, the timing of the development, government policies, and a unique mix of decisions making by individuals, firms and political groups within each urban area affect how macro social and economic forces are translated into specific urban patterns (Harvey, 1985).

With respect to land development, local authorities are required to have regard to the development plans and also the public rights and objections in deciding whether to approve or disapprove development proposals. However, development plans do not always cater for the changes in taste, habit and preference of urban habitants (Ratcliffe and Stubbs, 2003). Consequently, planning decisions are usually left to highly skilled professionals (town planners) and decision makers of local planning authorities and politicians; referred to as the *top-down planning* approach (Blowers *et al* 1982, Guy and Henneberry, 2002; Taylor, 2006). These practices, then, clearly constitute an important subject for further investigations.

Malaysian town planning system consists of development plans and development control procedures that comprise interrelated matters for planning considerations (Lee, *et al* 1990, Bruton, 2007). Few studies have been carried out which provide empirical evidence of the effects of lands use planning on housing development in Malaysia. Empirical evidence of the effects of town planning system on housing land development could provide town planners and related professionals with important matters for consideration in preparing development plans. If the causes of these effects are identified, town planners and decision makers should be able to make the right choice to avoid undesired outcomes (Tiesdel and Allmendinger, 2005). Therefore, the purpose of this research is to investigate how town planning control affected housing land development in Kuala Lumpur, Malaysia.

2.0 An Overview of Land Use Planning and Housing Development

Literatures on this subject disseminate discussions from studies that have adopted several distinct approaches and views such as classical economy and political economy. Among others, a study by Hall (1973) shows that the ratio of land prices to house prices (for a constant density unit) had risen steadily and the land prices per acre increased between 1939 and 1959, but the ratio of plot price to land price remained constant because of the reduction in house size. Thus, as price per acre increased, houses were constructed on smaller lots and at higher densities (Adams and Watkins, 2002).

The implementation of planning system relating to housing development encompasses various planning activities, starting from the acquisition of the site to the disposal of the products (Ratcliffe and Stubbs, 2003). The role of town planning control can be examined at each step of this development process. As Adams and Watkins (2002) suggested, the actual market outcomes in terms of price, output or housing density should be first observed and then followed by investigations of the ways in which the implementation of town planning control or policies.

Generally, the above studies sought to provide a partial analysis of the distributional effects of planning intervention in the housing market. Although estimates of the magnitude and distribution of the effects differ, it is agreed that planning constraints had led to higher prices and densities of new housing. Land use planning also caused restriction in the quantity of homes supplied and convergence in the type and design of new homes.

2.1 Land use planning in Malaysia

Town and country planning was introduced in Malaysia in early 1920s, when the country was known as Malaya (Peninsular Malaysia) under the British Colonial administration. Town planning legislation had undergone several exercises to include necessary changes to attain the present Town and Country Planning Act 1976 (Act 172). The first amendment was made in 1995 to include provisions for environmental considerations that should be considered by planning authorities in forward planning and

development control activities. The latest amendment to Act 172 was in 2001; referred to as Act 1129, and introduced a three-tier planning system (National Physical Plan, State Structure Plan and Local Plan (for local planning authority area). Through the new town Planning Act, the housing policies can be more easily interpreted and adapted for the local circumstances (what is called the local plan). The local plan is what the local authority must take into consideration in dealing with planning applications.

Figure 1: Institutional framework of land use planning system in Malaysia

Source: Bruton (2007)

In addition to development plan, planning approval process contributes to delays in housing development. The statutory requirement provides that the authority in planning matters is the local planning authority, but land matters falls within the jurisdiction of the state authority. Inevitably, this cause further delays and may result in problems such as increased production cost, prolonged housing problems, and disruptions in the supply of housing land. The supply of housing land is affected because the land owners may not release their land for residential development until such time as the property market becomes attractive to the land owner and housing developers (Harvey, 2000). The effort of planning authorities to expedite the approval process by using a non-statutory local plan, local plans in drafted forms, as a guide engenders uncertainties to developers. The non-statutory plan is not legally binding and is subject to change without public notification.

Another main legislation provision related to land development is the National Land Code, 1965 (NLC, 1965). All land transactions, changes in usage, alienations, subdivisions and partitions in Peninsular Malaysia must accord to the NLC, 1965.

3.0 The effect of town planning control on housing development in Kuala Lumpur, Malaysia

The rapid pace of urbanization has generated and intensified urban problems in the existing built-up areas. The most important problem, which forms the main focus in this study, is the inadequate supply of houses to accommodate the existing and increasing numbers of urban families relative to various affordability levels (Mohd. Razali. 1992; Ghani and Lee, 1997). Government policies in the five-year national plans are to provide "decent housing" to all, despite the problem of escalating production costs (Malaysia, 1991).

Consideration of planning authorities in evaluating planning applications and the factors affecting housing development in this study are analysed based on primary data obtained through questionnaire survey using face-to-face interview technique. Private housing developers are selected based on the *cluster sampling* (Nachmias and Nachmias, 2000; Leedy, 2001). This method of sampling enables a researcher to work within its constraint because the sample drawn from all housing developers in Peninsular Malaysia can meet the minimum requirement of samples for satisfactory statistical analysis, which should be more than 10 samples for each variable. On this basis, the sample size determined for this research is 160 drawn from 1009 registered housing developers in Real Estate Housing Developers Association (REHDA) annual report 2004.

The survey was conducted within eight months in year 2005 and 2006 using semi-structured questionnaires. All information from the questionnaires was then processed using Statistical Package for Social Science (SPSS) . The method of descriptive analyses that include the mean and the median was used to identify the private housing developers' problems relating to town planning components. The spearman rho' correlation was employed to identify the interrelated components within the town planning factors. The factor analysis as a form of multivariate analysis used for analytical descriptive was explored to identify the dimensions of town planning factors to indicate the dominant factor.

3.1 Planning Factors

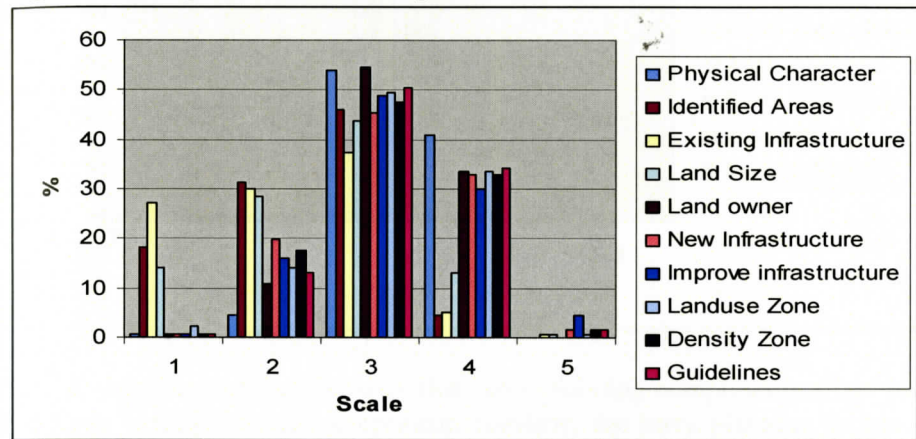
The respondents for the study comprised of representatives from housing developer with experiences in housing development. Based on the sample size of 137 the estimated errors in this study are likely to be below 10 percent..

Since this study measures the attitude of problems faced by private housing data using Likert scale, the data are of ordinal scale and best to be displayed by bar charts and table of mean and median. Based on the descriptive analysis, majority of the investigated components reveals that town planning system

affects private housing development. Out of 30 components (variables), only 4 components, namely residential area, existing infrastructure, land size and extra conditions, are found to be in the 'least and lesser problem' levels.

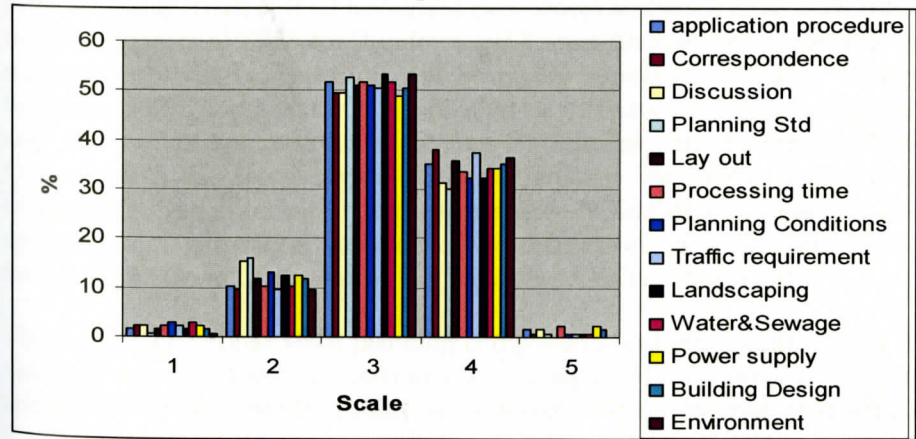
With respect to development plan factor, seven components are found to affect private housing development (Figure 2). The components are: land ownership; need new infrastructure; infrastructure improvement; land use zone, density zone; and development guidelines. Therefore, these evidences reflect the way of the development plan was prepared which lack of consideration given to land ownership constraints within the identified area for housing development, the obstructions of new and proposed improvement to infrastructures, limitations related to land use and density zoning and restrictions of the development guidelines.

Figure 2: Components of Development Plans



Under the development control factor, fourteen components are found to affect private housing development (Figure 3). The components are: application procedure for planning permission; correspondence of planning departments or local planning authorities; consultation and discussions with planning officers; planning standards; proposed housing lay out design, duration of approval process (time consuming), planning requirements; traffic engineering requirement; landscaping requirements; water supply, electricity (power) supply and sewerage system; building designs; and environmental control. Of all the components that affect private housing development, three sub-factors can be identified based on the values of the mean that are: planning administration; planning evaluation process; and requirements of external technical agencies. Therefore, the occurrence of planning delays, as the issue raised by several researchers, especially from submission planning application until getting approvals are undeniable based on the information given by respondents. In addition, additional costs have been indirectly imposed in housing development through various technical requirements.

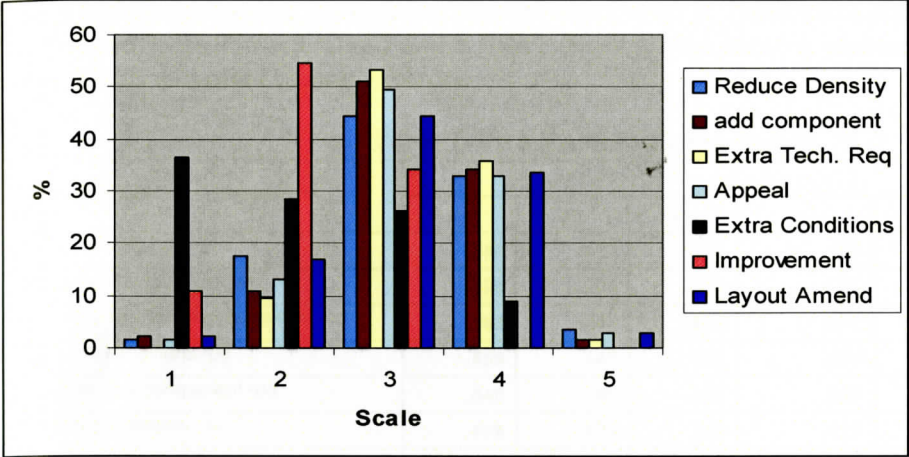
Figure 3: Components of Development Control



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With regard to the planning decision factor, six components are found to affect private housing development (Figure 4). The components are: amendment to the proposal; improvement to the lay out plan; asking to reduce the proposed density; imposed additional land use component, extra technical requirement; and appeal. Except for the appeal, the components are indirectly imposed additional costs to housing development on top of the requirements that have been determined at the technical department level. This also reflects the planning authority prerogative powers that are being applied in the planning system.

Figure 4: Components of Planning Decisions



This descriptive analysis illustrates that town planning components affect private housing development, but there is no dominant component. Similarly, the three planning factors are found to have affected private housing development but the dominant factor can not be identified by this level of analysis. Therefore, further analysis reveals the main planning components and the dominant planning factors affecting private housing development.

3.2 Dominant Planning Factors

Since the components constitute the planning factors, this section focuses on the analysis of the relationship between components to extract the dominant town planning factor. This analysis is carried out by employing the factor analysis technique provided in SPSS for Windows. Nachmias and Nachmias (2000) and Ahmad Mahzan (2002) mention that the most important work for non-statistician is to interpret the outputs of the factor analysis rather than to worry about its formula. In this study, the factor analysis will reveal the results concerning the relationship between all 30 independent variables and display the factors.

Prior to this analysis, several important procedures and steps have been followed by this study based on the requirements of SPSS for Windows and Factor Analysis technique. The technique assumes that items representing a single dimension will be highly correlated with that dimension. Thus, the correlation between an item and a factor is represented by a “factor loading” that is similar to correlation coefficient and can be interpreted the same way (Nachmias and Nachmias 2000, Ahmad Mahzan 2002). Consequently, the results from the factor analysis are further analyzed to examine the interrelated components (variables) based on the occurrence of similarity views among respondents by employing the spearman rho correlation technique. The differences of views among respondents to the identified factors are analysed by employing the One-Way ANOVA technique.

The variables comprise town planning components and other components that have Crombach’s Alpha values of more than 0.7 are used as the data input into the process. Out-put from the principal factor analysis (PFA) as shown by Table 1 is the result from the rotation of initial component factors. The PFA

output shown in the Table 1 can be interpreted in many ways. Due to the purpose of the method used to identify the dominant factors, the coefficient or called 'loading' less than 0.3 is considered weak to represent as indicator to the factor and excluded (Nachmias and Nachmias 2000; Ahmad Mahzan 2002; Jackson and Watkins 2005). The bold figures in italic show the high factor loading where the relationship between the item and the factors is considered strong. The rest of item loadings are weak to be considered as good indicators of the factor. Most importantly, *the factors with the highest percentage of explained variance provide the most parsimonious representation of the items* (Nachmias and Nachmias 2000.p.472). Based on this interpretation, the most parsimonious factor is Factor 1 because the percentage of explained variance is 46 percent compared to other factors. Thus, Factor 1 is the dominant factor. In addition, 23 items of having high factor loading have strong relation with Factor 1. These items constitute the assigned factors: development plan (Structure and Local Plan); development control; planning administration; technical requirements and other planning factors.

Table 1: PFA Rotated Components

Planning Items or components	Factors					
	F1	F2	F3	F4	F5	F6
Land holding - dp	.888	.177	.126	.129	-.037	.079
Application procedure -dc	.885	.204	.151	.057	-.129	-.017
Appeals for planning decisions - pd	.863	.047	.015	.072	-.093	.016
Specific conditions -pd	.859	.147	.131	.074	-.180	.049
Impose new component -pd	.840	.195	-.008	.045	.074	.082
Correspondences - dc	.839	.192	.142	.017	.095	.003
Planning Standard compliance - dc	.830	.064	.010	-.050	.032	-.069
Traffic requirement - dc	.824	.051	.249	-.031	.092	-.016
Amendments during evaluation - dc	.822	.129	.081	.005	.147	-.027
Duration of approval -pd	.815	.191	.103	.088	.046	.077
Planning guidelines - dc	.810	.158	.032	.247	-.064	.142
Extra planning requirements - pd	.800	.196	.152	.014	-.227	-.028
Electricity supply requirement – dc	.782	.102	.096	-.130	.039	-.172
Layout design –dc	.773	.190	.302	-.120	.063	-.007
Discussions with LPA - dc	.698	.099	.389	-.048	.161	.068
Planning requirement -pd	.692	.081	.335	-.049	.196	-.007
Infrastructure improvement - dp	.681	.017	-.046	.294	-.121	-.296
Density zone - dp	.674	.107	.162	.331	-.151	-.245
Amendment to proposed layout plan - dc	.658	-.115	-.204	.024	.359	.074
Land use zone - dp	.650	-.174	-.142	.331	.069	.341
Density reduction -pd	.633	-.015	.326	.009	-.072	.134
New Infrastructure -dp	.610	-.072	-.104	.326	-.116	.170
Environment control requirements - dc	.610	-.086	.025	-.098	-.092	-.141
Physical characteristic -dp	.147	.878	-.051	.025	-.050	.045
Landscaping Requirement - of	.426	.467	.112	.162	.035	-.037
Water supply & Indah Water requirements -dc	.236	-.022	.818	.126	.017	-.010
Extra conditions - pd	-.139	-.138	.119	.238	.686	.066
Existing infrastructure - dc	.120	.193	-.083	-.195	.637	-.398
Land subdivision - of	.028	.060	.008	-.038	-.075	.857
Eigenvalues	14.58	1.56	1.32	1.21	1.13	1.04
% of explained variance	46.19	4.95	4.89	4.72	4.42	4.40
Cumulative %	46.19	51.14	56.03	60.75	65.17	69.57

Note: F = factor loading

Factor 1 = development plan (structure and local plans)

Factor 2 = environmental control under other planning factors

Factor 3 = technical requirements

Factor 4 = planning evaluation under development control,

Factor 5 = planning guidelines

Factor 6 = land administration (Land Law).

The sign to each item helps to identify the items under which factor such 'dp' depicts development plan, 'dc' for development control, 'pd' for planning decisions and 'of' for other planning factors. As Table 1 above shows, private housing developers have faced problems relating to policies and development concepts outlined by respective development plans. Since the main function of development plans is to guide development control and planning decisions, the development plan emerges as the dominant factor in housing development.

4.0 Findings

This research adopts a framework of the structure and agency model that emphasizes the roles, behaviour and decisions of different actors, their interrelationships and the impact they have on development. Based on this analysis model, the most important step is the identification of the institution, the agents and the players. In the context of Kuala Lumpur, CHKL is the local planning authority which is treated as an agent of the public institution and the developer is an agent of the market institution. The interaction of these two agents is influenced by the higher institutions namely the country constitution, economy and legislative provisions. The key players are the town planners, architects, financiers, land owners and other technical man-powers who work either in the public institution or in the market institution.

The housing developers which are performing under the market institution must regard to the decisions and controls by the government agencies and decision makers. Thus, developers have to play their roles within the legislative frameworks and have to take their own risks in dealing with land development. They are entrusted to provide decent housing for all Malaysians and to commit with social obligations that include contributions towards sustainable and healthy environment. Besides responsibilities to deliver completed housing to house buyers under the Developers Licensing Act 1966, housing developers are also affected by the country economic performance. During economic recession periods, some housing developers had to leave their project abandoned. Thus, the changes of housing demand made housing developers to be more cautious in their attempts to pursue profit maximization objectives. Their levels of profits are determined by the difference between the selling price and the production costs. Besides other factors, the town planning control is claimed to have partly contributed to housing development costs and products because the town planning control is one of the government tools in intervening the housing market. Due to the assertions of unintended outcomes of planning system, this research has ascertained the town planning factors that had affected housing land development during the period of 1976 to 2005.

Town planning factors are divided into three main factors namely Development Plan, Development Control, and Planning Decision. Each factor comprises several components, and 30 components were identified for investigations. The primary data were gathered through face-to-face interview technique. From the descriptive analysis method, 26 out of 30 investigated components indicate the occurrence of private housing developers' problems in relation with the way state and local planning authorities implemented the planning system. All the above three main factors are associated with the problems.

By using the factor analysis technique, the results show the existence of correlations among town planning items in six dimensions. The first dimension comprises a group of components that are associated with the development plan that indicates the influences of the development plan on those components. Therefore, the problems faced by private housing developers in the identified planning

components are associated with the way the development plan (structure and local plans) are prepared and interpreted in development control and in planning decision. The planning authorities have caused the private developers to embrace problems with housing location, designs, intensity and quality. Obviously, this finding supports the theory that the implementation of town planning system affects housing development in terms of housing location, quantity, house types and prices as highlighted by Evans (2004), Harvey (2000), Cheshire and Sheppard (2005), Monk and Whitehead (1996) and Bramley (1993).

However, the implementation of planning system was incorporated with non town planning matters such as administration, engineering, political ideology, legal and social issues. Based on the significant components derived from the analysis, the results can be classified as planning administration, technical requirements and land laws. Under the planning administrations, delays in planning approval process confirm the claims made by Sen (1991), Mohd. Razali (2002) and Goh (1997). Under the land laws, the problems of land ownerships highlighted the ownership constraints in land development which support claims made by Salleh Buang (1997), Goodchild and Munton (1985), and Masey and Catalano (1978). The private developers' problems with technical requirements are related to the increase in production costs and the delays in housing development. This particular finding support the claims made by Goh (1997), Sen (1991) and Lee *et al* (1990).

Land holding is identified as the main components affecting the land use planning of which will affect the developers choices to develop the identified housing location, to determine the size of the projects and house prices. The reluctant of land owners to release their land make developers to change their location or to slim down their projects sizes. Thus, the size and shape of the projects affect development costs and make developers to find other solutions from technical and social aspects such as by reducing streets and drains construction costs. In addition, the free hold land and the lease hold land titles avoid developers to amalgamate the land plot to merge the housing scheme because the different land holding status involve different land administrative procedures and land values (Marbeck, 1997; Salleh Buang, 1997).

5.0 Conclusion

This study demonstrates that the products of land development particularly the urban housing in Peninsular Malaysia are partly affected by the practice of planning authorities in implementing planning system where development plan (structure and local plan) was the dominant factor, associated with other planning components. The results of the analyses reveal that main components affecting housing development comprise of land for housing, approval process, planning guidelines, and technical requirements. Other factors are conditions and limitations imposed under the National Land Code 1965

This study concludes that firstly, the institutional structures and agencies established in Malaysia affected housing development based on administrative procedures in the planning approval process and the preparation process of the development plans. Secondly, development control activities in local planning authorities are very much tailored to accommodate technical requirements of technical bodies. Thirdly, town planning requirements and guidelines are seen to have ignored changes in taste, demand and technologies. Fourthly, there has been a lack of consideration of the impact of planning decisions on housing development. And finally, additional costs are indirectly imposed on housing developers, which result in the increase of the total land development costs.

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