

**IMPROVING OFF-SITE INFRASTRUCTURE PROVISION  
THROUGH THE PLANNING APPROVAL SYSTEM  
IN PENINSULAR MALAYSIA**

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## ABSTRACT

The scarcity of financial sources has caused local authorities to no longer remain as the single providers of off-site local infrastructure. This has forced them to diversify and identify new methods to accommodate the provision. This has raised the need for the present practice to be reformed in order to involve the private sector. This research examines the possibility of applying planning approval system to secure off-site infrastructure from the private sector. To achieve the objective, the research used both qualitative and quantitative methods to identify the hindering factors of the present practice of off-site infrastructure provision. The findings showed that most off-site infrastructure provisions were delivered by public sector. The private sector delivery was only evident in large-scale development. The responsibility to provide off-site infrastructure now falls under the mutual responsibility of both private and public sectors. In addition, the development plans has played a significant role in terms of the mechanism in coordinating new development with adequate provisions of off-site infrastructure. The tendency of private sector to contribute off-site infrastructure is influenced by the cost of development. The main issues of private involvement in local infrastructure provision (off-site) are caused by the inconsistency of the conditions imposed by local authorities to justify the requirements of off-site infrastructure. The findings propose the practice of off-site infrastructure provision to be clearly defined and standardised. The study revealed that planning approval system can be used to provide off-site infrastructure by private sector through negotiation with approving local authority as the most acceptable approach. However, it requires further investigations to detail how the framework of negotiations should be outlined and the structure to be applied. The implications of the findings have shown that the system should be improved by integrating the element of negotiations as alternative means in considering planning approvals and the types of infrastructure delivery should be diversified to include Build Operate and Transfer (BOT), Public-Private Partnership (PPP), Private Finance Initiative (PFI) and other methods of private delivery. The basis to seek contributions from private sector should be properly established and local authority therefore shall establish an Integrated Planning Approval System which enables them to distribute costs of providing infrastructure to potential users.

## ABSTRAK

Sumber kewangan yang terhad telah menyebabkan pihak berkuasa tempatan tidak lagi berperanan sebagai penyedia utama kemudahan infrastruktur yang berada di luar kawasan pembangunan swasta dan keadaan ini telah memaksa pihak berkuasa tempatan mempelbagai dan mengenalpasti beberapa pendekatan baru bagi memenuhi keperluan tersebut. Perubahan terhadap amalan semasa penyediaan infrastruktur diperlukan sebagai usaha untuk melibatkan pihak swasta. Selaras dengan itu, kajian ini mengkaji sama ada sistem kelulusan perancangan boleh digunakan untuk mendapatkan infrastruktur daripada pihak swasta. Untuk mencapai objektif kajian, pendekatan kualitatif dan kuantitatif telah digunakan untuk mengenalpasti faktor yang menghalang penglibatan pihak swasta menyediakan infrastruktur. Hasil kajian menunjukkan bahawa kebanyakan penyediaan kemudahan infrastruktur disediakan oleh pihak kerajaan manakala pihak swasta hanya menyediakan infrastruktur untuk projek berskala besar. Tanggungjawab menyediakan kemudahan infrastruktur sepatutnya adalah tanggungjawab bersama di antara pihak kerajaan dengan pihak swasta. Di samping itu, pelan pembangunan memainkan peranan yang penting sebagai mekanisme untuk mengkoordinasi cadangan pembangunan dengan penyediaan infrastruktur yang mencukupi. Kecenderungan pihak swasta dalam penyediaan infrastruktur pada masa ini adalah dipengaruhi oleh faktor kos sesuatu projek. Isu utama yang menghalang penglibatan swasta adalah ketidakselarasan garis panduan yang ditetapkan oleh pihak berkuasa tempatan untuk menjustifikasikan keperluan penyediaan kemudahan infrastruktur ini. Kajian mencadangkan supaya amalan ini diperkemas dan diselaraskan. Kajian ini juga mendapati sistem kelulusan perancangan boleh digunakan untuk menyediakan kemudahan infrastruktur daripada pihak swasta dengan menggunakan pendekatan perundingan dan diterima oleh pihak swasta. Pendekatan ini perlu diperinci dari segi kesesuaian kerangka perundingan. Penemuan kajian memberi implikasi bahawa pendekatan perundingan perlu digunakan sebagai kaedah alternatif di dalam mempertimbangkan kelulusan perancangan dan kaedah penyediaan infrastruktur perlu dipelbagaikan dengan menggunakan kaedah penyediaan swasta seperti *Build Operate and Transfer (BOT)*, *Public-Private Partnership (PPP)*, *Private Finance Initiative (PFI)* dan beberapa kaedah lain yang sesuai. Di samping itu asas untuk mendapatkan sumbangan daripada pihak swasta perlu disediakan dan pihak berkuasa tempatan perlu menyediakan suatu bentuk Sistem Kelulusan Perancangan Bersepadu untuk membolehkan kos penyediaan sesuatu infrastruktur diagihkan kepada pengguna yang berpotensi.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

Rapid urbanisation creates pressure in the demand for additional infrastructure at the local level. Sufficient infrastructure facilities are vital for a sustainable economy and local development. In many countries, infrastructure provision always concerns the involvement of public sector in providing the physical facilities, consisting of public facilities, roads and highways, hydroelectric dams, sewerage systems, water treatment plants, airports and many others.

Adequate provision of infrastructure is a prerequisite for the sustainability of local development. Local authorities (LA) increasingly find themselves in a shortage of funds. Due to rising costs of infrastructure, there is a need for a paradigm shift of provisions from public to private sector. This scenario has forced local authorities to identify new forms of delivery of local infrastructure from private developers.

This introductory chapter provides a context for the subsequent ones reviewing the background of the study in relation to current issues in local government infrastructure. The chapter discusses problems that constraint the involvement of private sector in local infrastructure provision with reference to the planning approval system. The chapter also outlines the purpose, scope, significance and the structure of the study.

## **1.2 An Overview of Urban Development and Local Infrastructure Provision**

Infrastructure has played an effective role in local development. The main concerns are often raised on the impact of infrastructure development on local communities, about the appropriate roles of public and private sectors in infrastructure financing, ownership and management. Enormous change in local development in the last two decades has sparked a shift of perceptions, likely shifting the role of public sector in local infrastructure development. At the same time central government has considerably reduced the allocation for local infrastructure provision.

Acceleration of local development coupled with financial limitation, have forced local authorities to diversify the full range of local infrastructure alternatives, in particular referring to those infrastructures located outside the responsibility of private developers (off-site). This scenario has forced local authorities to be more adaptive in formulating local development policies preferably in managing local infrastructure provision. According to Helmsing (2001), local authorities in many developing countries were allowed to include the private sector in local infrastructure provisions. This actually initiated a new chapter in local infrastructure development.

In the same scenario, London Mayor Ken Livingstone (London Housing, 2001) called for the involvement of private sector to be involved in local infrastructure provision. The mayor urged local authorities to acquire some gains from the private development in return for planning approvals. This would further strengthen the capacity of the local planning authority (LPA) to negotiate any possibility for additional infrastructure via planning gain method. This particularly involved off-site infrastructures required by local development. The rationale of the practice is that the approved development might generate a degree of development 'impacts' in term of the increased demand for new infrastructure in the surrounding

areas. This has to be managed by the respective local authorities by providing the appropriate infrastructure in order to ease the impacts.

In many countries, the involvement of private sector in local infrastructure provision offers new alternatives of local infrastructure delivery (Guy and Marvin, 1997; Ennis, 1997; Healey, 1997; Claydon and Smith, 1997). In Britain, planning approval has been widely used to secure local infrastructure such as social infrastructure, environmental and community facilities from private developers (see Ennis, 1997). The factors identified as causes of the scenario are the reduction of property tax that reduced the income of local authorities and the limitation of budget as imposed by the central government (Healey *et al.*, 1995).

The British planning approval system was identified as an effective means for local authorities to secure infrastructure facilities from private developers (see Healey *et al.*, 1995; Bunnell, 1995) and the system appearing as a normal expected spin-off from the development process through the state intervention to ensure the essential non-profit-making facilities are provided as well (Greed, 1996). These might range from the provision of basic physical infrastructure (such as sewers, drains and roads) and social facilities (such as schools, community centres, public conveniences, parks and bus stations).

### **1.3 Current Issues in Local Infrastructure Provision**

Provisions of public infrastructure at local level cover transportation infrastructure, water and wastewater, health sector and public buildings. Traditionally, the local government has carried out the responsibility at all stages of infrastructure development. These included the stage of planning, design, financing, construction, operation and maintenance (Hallmans and Stenberg, 1999).

There is no doubt that growing communities require recreational parks, local roads, waste water facilities, proper drainage systems, solid waste collection and disposal, streets, parks and other necessary facilities to be provided adequately. These facilities are needed for the community to function in a manner that protects the public health, safety and welfare for local development sustainability. With the scarcity of financial resources, the scenario has raised the question as to who should provide the infrastructures located outside the development area (off-site) and this remains a concern for many local authorities. According to Ennis (1997), two arguments exist here; one concerning the appropriateness of the private sector's increased share in the costs of provision; the other, concerned with the party that should pay for the cost of infrastructures, from which three potential cost-bearers have been identified: the landowner, the developer and the buyer.

The problems that constraint the involvement of private developers are as follow:

- i. Deficiency of consistent guidelines on off-site infrastructure provision requirements,
- ii. Insufficient funds for off-site infrastructures, and
- iii. Delay in obtaining planning approval with those projects involved with off-site infrastructure

These issues have some cumulative consequences on the responsibility of all actors in the sector. However the fundamental question is that between local authority and developer who must shoulder this financial burden, since by common consent, most on-site infrastructure has to be provided by the land owner or developer.

Today local authorities are urged to be more creative in diversifying methods to finance local infrastructure particularly using planning approval system instead of increasing the assessment taxes. As practiced in the British planning system, some off-site infrastructure is secured by planning approval and the practice incorporates the element of negotiation between local authority and private sector. Therefore, this research is aimed to look at the possibility of this practice to be adopted by the Malaysian planning approval system.

#### **1.4 Definition of Terms**

For the purpose of this study, the following definitions will be used throughout.

##### **a). The Concept of Infrastructure**

In Peninsular Malaysia excluding Federal Territory of Kuala Lumpur, by referring to Town and Country Planning Act 1976 (Act 172), the legitimate definition of infrastructure is divided into two broad categories, i.e. public amenities and public utilities. Public amenity includes open spaces, parks, recreation grounds and play ground. Whereas public utilities include roads, water and electricity supplies, street lighting, sewerage, drainage, public works, and other similar public services and conveniences. This definition is being applied by all local authorities in the country.

However, in the Federal Territory of Kuala Lumpur, the definition of infrastructure is defined by Federal Territory (Planning) Act 1982 (Act 267). The term infrastructure here refers to amenity and utility. Amenity means such quality or condition of a place or area as contributes to its pleasantness, harmony, and better enjoyment, and includes open spaces, parks, recreation grounds, and playground. Utility includes roads, water and electricity supplies, telephone

services, street lighting, sewerage, public works, and other similar public services and conveniences.

According to Stewardson (1995), there are two types of infrastructure, namely economic and social. Economic infrastructure usually refers to transport, gas, water, electricity and communication due to the 'hard' engineering-based delivery networks. However, 'social infrastructure' may include public schools, public hospitals, police and emergency services and inter-local district roads.

Webb (2004) on the other hand classifies infrastructure into two main categories: the economic infrastructure (such as telecommunication, transport networks etc.) and the social infrastructure (such as schools, hospitals, public housing open space etc.). The distinction between these two types comes from the level of capital intensity in infrastructure service delivery.

**b). Off-site and on-site Infrastructure**

Based on a study conducted by Utah Governor's Office of Planning and Budget (2004) to develop Infrastructure Cost Assessment Model, there are three levels of infrastructure:

- i. Regional infrastructure; this includes roads, transit and water supply. Planned by state governments and financed by state and/or federal funds.
- ii. Sub-regional (off-site) infrastructure; this includes water and waste water treatment facilities, distribution lines, storm drain facilities, arterial roads, maintained by the municipality or service district. This type of infrastructure is financed by local governments through bonds, impact fees and tax revenues.



- iii. On-site infrastructure by developers; this includes roads, water lines, sewer lines, dry utilities (telephone, electric, etc.) and storm drains financed by the private developer.

In the context of this study, on-site infrastructure would refer to those needed infrastructures identified as mandatory requirements for the proposed development. In all cases, these types of infrastructure are secured via planning requirements and fully provided by developers upon the completion of the project; whereas off-site infrastructure would refer to those needed infrastructures outside the development boundaries specified by planning approval due to the justification of development impacts. In many cases, the term is used alternately as public utility and public amenity.

#### **c). Development Control**

The practice of development control ensures that land activities carry out according to specified development plans. It is part of the planning system to ensure efficient and effective land use in the interest of the public, a set of frameworks in which local authorities work. As defined by McCarthy *et al.* (1995), development control is a system of issuing development approval for the purpose of land-use development. In the context of this research, development control features the ability to secure infrastructure facilities both on-site and off-site prior to local authority granting planning approval, through a proper framework of land use control regulation, significantly contributing to private provision of local infrastructure during planning approval system.

**d). Development Impacts, Planning obligation and Planning Agreement**

The purpose of regulation on land use is mainly to avoid the loss of amenity to immediate neighbours to cover the impacts of development on the community. This requires local authorities to identify the impact of proposed development. If there are such adverse social costs, who should shoulder the correction? Normally after the impacts are identified, a proper estimation is made. Then the developers (applicants) shall pay a certain sum to the local authority concerned prior to acquiring planning approval.

Whereas planning obligations and planning agreements are means to ensure that an appropriate level of infrastructure is achieved to serve new development. The provision of infrastructure within the proposed development is usually covered by conditions attached to planning approval. However, this cannot be applied to land outside applicant's control unless the impact of the proposed development is identified.

Planning agreements and planning obligations are offered by developers to ensure the fulfilment of services and facilities required to serve a proposed development. Developers also offer a way of striking bargains safeguarding the public interest. The planning obligations attached to planning approval would help the local authority to secure contribution from private sector to facilitate a proposed development. These include the agreements (e.g. unilateral undertakings) between the applicants and local authorities on an obligation offered by the applicant to the local authority either in support of a planning application or a planning appeal.

### **e) Planning Gain**

The nature of planning gain lies in the view that by granting planning approval, the local authority is conferring great increase in land value to land owners and in turn, benefit from the development gains (Allison and Askew, 1996). The purpose is to mitigate the impact of proposed new development. The various presented definitions of planning gain are significantly broad. The term has been used to encompass almost any outcome deemed desirable by the local authority. In the context of Town and Country Planning Act 1976 (Act 172) and Federal Territory Planning Act 1982 (Act 267), such practice was considered under development contributions. Indeed the idea is to mitigate predicted development impacts identified during the planning approval stage.

## **1.5 Problem Statement**

The adequate provision of infrastructure is vital for the local development which becomes a major concern for many local authorities. Choguill (1996) emphasises that the adequate provision of infrastructure is a precondition to the sustainability of local development. However, the proliferation of infrastructure costs limits the ability of local authority to provide adequate off-site infrastructure (Healey, 2003). At the same time, local authority has periodical infrastructure maintenance which implicates a considerable allocation of its budget. This remains an on-going debate in most countries. According to Vickerman (2002), there has been increasing questioning of the rationale for this as the cost of infrastructure provision indirectly boosts the productivity of private sector. Therefore, the question is raised whether or not there exist ways to shift at least some of the responsibility of infrastructure provision to those who may benefit from it most.

In Peninsular Malaysia, the problem of infrastructure provision faced by many local authorities largely concerns the provision of parking facilities, recreational parks, wet markets, hawker centres and others related community facilities. It also implicates a substantial allocation of local authority expenditure for the maintenance of the existing infrastructure. Referring to Table 1.1, local authorities collect revenue to cover operation expenses and construction of new infrastructure for the benefit of tax payers. The revenue comprises of assessment rates, trading licenses, parking fees, planning fees and grants from the state government.

Among the local authorities, City Hall of Kuala Lumpur (DBKL) is the largest in terms of revenue generation of four municipal councils compared to Petaling Jaya (MPPJ), Subang Jaya (MPSJ), Shah Alam (MPSA) and Klang (MPK). However, a large portion of the revenue has been allocated for development and operating expenses including infrastructure development. The amount allocated for urban infrastructure has been spent for upgrading and maintenance of existing infrastructure and construction of new ones. This incurs a deficit of 56% increase in urban infrastructure expenditure to RM1.09 billion.

A similar scenario reoccurred among three local authorities in the State of Johor. For instance, in the City Council of Johor Bahru, a total of RM42 million was required for local infrastructure development in 2004 (as compared to RM22 million in 2000). The fund was used mostly for construction and maintenance of off-site local infrastructure comprising of public utilities, hawkers facilities, drainage system, flood control, sewerage system and roads (see Table 1.2).

**Table 1.1:** Revenue of major municipalities in Malaysia, 2003

	Revenue/ Collection	Expenditure (RM' million)			Surplus/ Deficit
		Operating	Development	Total	
Municipal Councils					
Dewan Bandaraya KL	918.66	888.50	927.42	1,815.92	-897.26
Penang	175.70	179.99	74.84	254.83	-79.05
Subang Jaya	164.44	122.90	41.54	164.44	-
Petaling Jaya	151.87	130.68	28.77	159.45	-7.58
Shah Alam	127.69	-	-	118.26	9.43
Klang	126.70	122.50	20.00	142.50	-15.80
Ipoh	98.00	-	-	103.00	-5.00
Total	1,763.06	1,444.57	1,092.57	2,758.40	-995.34
> Actual collection and spending up to October 2003.					
> The figure tabulated above represents collection and spending for 2003.					

Source: Adapted from Ministry of Housing and Local Government, 2005

**Table 1.2: Local Infrastructure Expenditure in Major Local Authorities in the State of Johor (2000-2004)**

(RM*million)	2000			2001			2002			2003			2004		
	MBJB	MPJB	MPK	MBJB	MPJBT	MPK	MBJB	MPJBT	MPK	MBJB	MPJBT	MPK	MBJB	MPJBT	MPK
Income															
Assessment Rates	95.036	56.011	19.670	98.236	56.930	21.227	99.507	57.848	23.637	102.507	58.386	36.959	105.507	59.686	38.006
Non-Assessment Rates	20.451	13.570	3.983	25.080	14.590	3.746	32.261	15.606	3.713	34.689	16.667	3.936	36.272	17.657	4.059
Contributions in Lieu of Rates	4.702	5.320	1.432	6.638	59.940	1.306	6.473	6.559	0.664	6.293	6.324	2.685	6.293	6.944	2.985
<i>Total</i>	120.18	74.901	25.085	129.954	77.410	26.279	138.241	80.013	28.014	143.489	81.377	43.580	148.072	84.287	45.050
Administrative and operating Expenditures (a)															
Emolument	17.889	3.590	3.358	20.475	4.180	3.548	24.060	4.768	4.246	26.201	4.431	4.266	26.987	5.023	4.394
Services & Supply	63.758	30.590	8.643	68.170	32.240	10.975	72.981	33.894	13.823	71.465	33.853	20.118	71.822	35.502	19.961
Assets	1.562	2.220	0.408	3.616	2.76	0.909	3.263	3.300	0.592	1.424	0.640	0.665	1.497	1.202	0.320
Contributions & Fixed Payments	5.076	0.041	0.210	7.080	0.03	0.187	7.281	0.095	0.014	7.699	0.144	0.073	7.930	0.153	0.211
Miscellaneous	3.738	4.520	0.100	4.074	4.360	0.072	4.130	4.197	0.164	4.254	4.004	0.263	4.382	3.889	0.270
<i>Total</i>	92.023	40.960	12.719	103.414	43.570	15.691	111.715	46.254	18.839	111.043	43.071	25.385	112.618	45.769	25.156
Development Expenditures (b)															
Public Utilities	0.001	2.610	3.825	3.659	5.060	5.051	6.3504	7.510	7.078	12.700	10.670	9.000	10.750	12.400	5.450
Hawkers facilities	1.200	1.793	0.046	3.650	2.531	1.011	2.300	3.753	1.616	1.200	2.100	0.400	1.200	2.100	0.000
Offices/Buildings/Lands	1.500	0.413	0.500	2.242	0.342	0.473	2.830	0.500	0.000	3.700	0.400	0.150	2.200	0.200	0.000
Drainage system, Flood control, Sewerage and Roads	19.451	17.142	3.008	17.892	21.413	3.919	22.050	23.820	6.397	22.600	21.00	7.500	27.600	19.00	6.500
<i>Total</i>	22.151	21.960	7.379	27.443	29.350	10.454	33.530	38.923	15.091	40.200	36.820	17.050	41.750	37.500	11.950
Total Expenditures (a+b)	114.17	62.920	20.098	130.857	72.920	26.145	145.245	85.176	33.930	151.244	79.891	42.435	154.368	83.269	37.106
Surplus/(Deficit) Income	6.015	11.980	4.987	(0.903)	4.490	0.134	(7.004)	(5.163)	(5.916)	(7.755)	1.487	1.145	(6.296)	1.018	7.944

Indicator: MBJB - City Council of Johor Bahru; MPJBT - Municipal Council of Johor Bahru Tengah ; MPK - Municipal Council of Kulai  
(Source: Adapted from MBJB, MPJBT and MPK, 2005)

## **1.6 Research Questions**

As deduced from the discussions above, the raising cost of infrastructure provision has significantly reduced the possibility of local authority to provide off-site infrastructure. Therefore, there is a need for the local authority to identify ways to accommodate infrastructure requirements by seeking new methods of funding. However, in Malaysia under the present practice of planning approval system, local authorities are allowed to impose such planning requirements prior to granting planning approval.

Thus, the research will aim to answer the question as to how off-site local infrastructure provision can be secured by local authority using planning approval system. Accordingly the research is designed to answer the following questions:

- i. How is infrastructure provision practices in Malaysia?
- ii. How is planning approval system applied by local authority to secure infrastructure provision?
- iii. What are the problems pertinent to off-site infrastructure provision in obtaining planning approval from local authority?
- iv. What are the perceptions of developers and local authorities on using planning approval to secure off-site infrastructure provision?

## **1.7 Purpose of the Research**

The main purpose of this research is to study the possibility of using planning approval system to secure off-site infrastructure from private sector. In achieving the objectives above, it is required to understand the present practice of planning approval system. Further, to identify factors closely associated with the constraints of the active involvement of private developers in providing infrastructure. To achieve this objective, the research was carried out based on the following sub-objectives:

- i. To study how local authority secures off-site infrastructure.
- ii. To examine the current practice of off-site infrastructure provision through planning approval system.
- iii. To identify factors closely associated with constraints of developers' involvement in off-site local infrastructure provisions.
- iv. To identify the possible approaches of how planning approval measures can be used to secure off-site infrastructure provision.

The findings subsequently will help develop recommendations on off-site infrastructure provision for local authorities as an alternative means to secure infrastructure facilities; with the local authority broadening the possible means to meet the required facilities. As an outcome, the findings of this study help develop an appropriate model to improve the off-site local infrastructure provision in the nation.



## **1.8 Scope of Research**

The research will start with the review of pertinent theories and concepts of development planning system and development control as practised in Peninsular Malaysia with reference to the impact of rapid urbanisation on major local urban centres as the result of inadequacy of local infrastructure. This approach will give a wider scope of the concept pertaining to local infrastructure provision. It is done in order to form the basis for the conceptual framework of the study. It will then discuss, as a background, the financial constraints and problems faced by local authority in providing infrastructure facilities which necessitate a proper and viable system or approach imposed to encourage private sector to participate in providing infrastructure facilities.

The focus of the research also would be to identify how a new planning approach such as planning gain can be adopted as an alternative means by local authority to secure its infrastructure facilities under the present planning approval system. Therefore the study needs to identify the factors which are being closely associated with constraints of the active involvement of private sector in local infrastructure. That requires an evaluation on the perceptions of developers and local authorities on how this new approach can be adopted by the local authorities to secure infrastructure facilities.

Finally, the research will analyse the findings that lead to a system (or approach) to enable private developers to participate proactively in local infrastructure provision and also recommendations to improve the existing system of infrastructure provision.

## 1.9 Significance of the Research

The availability of adequate infrastructure is critical to local development. The lack of infrastructure would affect the well-being of local communities and consequently harm the momentum of local property sector development in particular and the efficiency of economy in general. There is a variation between different planning systems and infrastructure provision that is financed through a variety of means operating at local level by both private and public sectors. What is needed here is a means by which infrastructure is provided by private sector using planning approval system.

Graham and Marvin (2001) stressed that one of the significant reasons why local infrastructure has been neglected is because of the relationship between infrastructure provisions in their broader sense and the planning system. Again, Graham and Marvin (2001) identify several factors for this insight, such as:

- i). Issues relating to urban governance and local economic development take no account of the local infrastructure which is critical to all local development; and
- ii). Some infrastructure network characteristics are hidden in nature. Some are located underground and the management of these facilities are undertaken by technical institutions or agencies. Another crucial aspect of local infrastructure provision is the question of who pays for the cost of infrastructure provision? There are three potential parties identified as responsible in absorbing the cost incurred, namely; land owner, end-user and the developer (Keogh, 1985).

Based on the previous discussion, the significance of this research is as follows:

- i. Limited research on the effectiveness of planning approval system to secure infrastructure. What is available at present does not shed much light on the detailed procedure of the planning approval aspects to promote infrastructure provision. This leads to the lack of appropriate guidelines, acting as the framework for off-site local infrastructure provision. Since the use of negotiation in planning agreements to secure planning gain has been an on-going debate, there is a need for such research to be carried out in order to gauge the level of perception from both private and public sectors.
- ii. The proliferation of infrastructure costs apparently induce a negative impact on the local authorities' capacity of planning and implementing infrastructure provision.
- iii. Recent studies in U.K and Europe show that most of the subject countries practice the approach of planning gain in their system as an alternative tool enabling local planning authorities (LPAs) to reduce the financial burden in providing on-site infrastructure.
- iv. The findings of the study would be very significant for local authorities to diversify and broaden the present means to secure off-site local infrastructure. In addition, it is deemed important for the local planning authority to be proactive in identifying ways to generate additional financial sources to accommodate infrastructure requirements to meet the future demands of the fast growing urban sector.
- v. As argued by Helmsing (2001) in the context of local development, local economy is very much shaped by central government agencies and critically depends on central government intervention. Some of these interventions were implicit and discrete rather than based on an explicit policy of local

development. Local economic development strategy is a means to achieve this. Local resource mobilisation becomes crucial to finance these investments. Therefore local authorities are encouraged to secure their own local infrastructure in order to provide the required infrastructure.

The material on off-site local infrastructure provision which is readily available tends to be limited in scope and scattered amongst a variety of sources. Due to the significant aspect of local infrastructure development as outlined above, it is considered of value to study how off-site local infrastructure can be secured using planning approval. Therefore, the significant feature of this research is to undertake a review of the existing research on planning approval and to relate the research findings to the current issues on off-site local infrastructure provision.

#### **1.10 Expected Contributions of the Research**

The present studies on planning approval do not shed much light on the details of how the system can be used as a method to secure infrastructure for local authorities. Much of the 'evidence' derived from literature is anecdotal in form and often relates to the operations of planning in general rather than the appropriateness 'features' of planning approval to be used as legal mechanisms to secure contributions (off-site infrastructure) from private sector.

Apart from the objective to propose an improvement to the present practice of local infrastructure provision system, this research also would contribute significantly to the following areas:

- i. The research would then provide a basis for local authority and other public authorities to secure infrastructure from private sector.
- ii. The findings of this study further pave the way for future research on local infrastructure provision.

- iii. According to Claydon and Smith (1997) such study can contribute to the enhancement of the present planning approval system pertaining to off-site local infrastructure provision.
- iv. As argued by Guy and Marvin (1997) however, if local authorities don't take into account these new infrastructure practices, they might lose significant opportunities providing wider benefits to the local community. Therefore, the expected findings of the research would further furnish the present practice, provided that the perceptions of both private developer and local authority are positive.
- v. Many authors look at the fundamental constraint of local infrastructure provision as involving the private sector. Guy and Marvin (1997) argue that the current debates about developer contribution in relation to infrastructure provision look quite confusing to developers. They define this move as the efforts of the authorities to 'off-load' their responsibility. This research is intended to study the possibility of using planning approval system to acquire off-site infrastructure provision from private sector.

### **1.11 Thesis Structure**

This thesis consists of eight chapters. Figure 1.1, illustrates the summary of the overall structure of the thesis. The thesis starts with the introduction in Chapter 1. The chapter outlines a very general overview of the research which briefly discusses the research problem, the purpose, scope and also the objective of the research.

Chapter 2 will discuss the salient background in local infrastructure provision. A review of literature on relevant theories and concepts on local infrastructure and the concept of off-site infrastructure provision which is discussed under development control practice. Apart from this, the chapter also includes the review of some impacts of urbanisation on the local infrastructure.

As a background to the research, the discussion in Chapters 3 provides an overview of local infrastructure provision and development control system with reference to the Malaysian context. The chapter also discusses how planning approval is practised at local authority level related to infrastructure provision within the framework of the Malaysian planning system in order to answer one of the research questions.

Chapter 4 will examine the local infrastructure provision in Malaysia. The main focus of the chapter is to discuss how planning approval within the framework of development control applies to secure infrastructure from private developers. It will then have a closer examination of the local scenario on infrastructure provision.

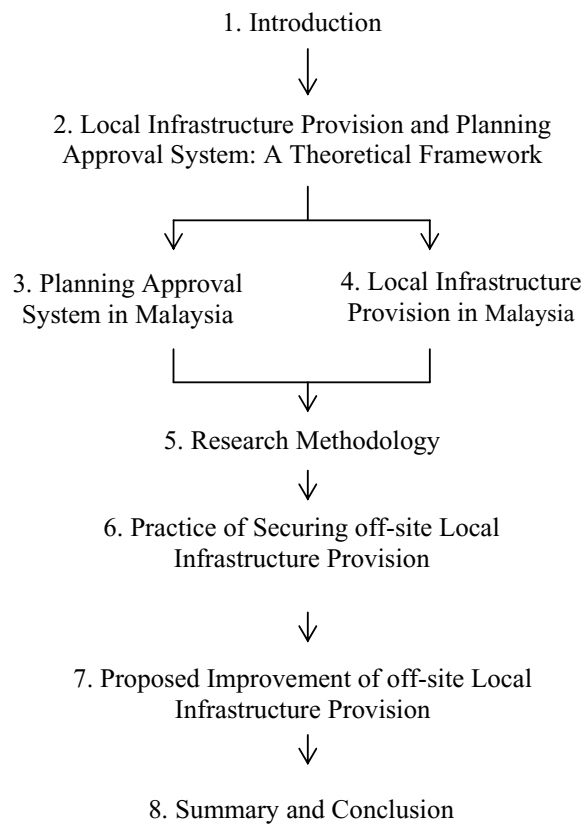
Chapter 5 outlines the foundation of the work by discussing the methodology in performing this research. It starts with defining the scope as well as the strategy employed in designing the research. It will discuss the conceptual framework from which the main question of the research is to develop and explain

the methods of data collection and analysis. This chapter also enumerates the processes involved in constructing the research questionnaire for data collection.

Chapter 6 presents the results obtained from the fieldwork interview. It discusses the perception of developers and local authorities on local infrastructure provision in Malaysia, which forms the main focus of this study. The analysis looks at the local authority perception on local infrastructure provision, which includes the current practice of off-site infrastructure provision and development approval practice, how local authorities secure their off-site infrastructure provisions, the feasibility of using planning approval means to secure infrastructure facilities.

Chapter 7 addresses the perceptions of the two key players of the research, local authority and developer on off-site local infrastructure provision. In the chapter, the discussion mainly focuses on recommendations to improve the present system of planning approval to incorporate private options in off-site infrastructure provisions.

Finally, Chapter 8 will summarise and amalgamate all findings into one coherent set of results in order to answer the outlined research questions. The chapter discusses the limitations to this research and ends with recommendations on areas for future research.



**Figure 1.1:** Thesis structure



### **1.12 Conclusion of the Chapter**

At the beginning of the chapter, an introduction to the background of the study was given generally with the purpose to provide a thorough review to the research problem. The relationship with the main identified research components between infrastructure provision and planning approval system were discussed. In the second part, a brief overview followed on the current situation of off-site local infrastructure provisions within the framework of Malaysian development control system.

A number of successful experiences in others countries were generally overviewed. The following parts elaborate findings on similar research areas. This is done by a brief review of the problems encountered by local authorities in securing off-site local infrastructure provision. The last part of the chapter outlines the structure of the study in order to show the relationship between chapters, to ensure that the flow of the argument can be referred systematically.

## References

- Ache, P. (2003). Infrastructure Provision and the role of planning in the Ruhr Region, In: *Infrastructure Provision and the Negotiating Process*, edited by Frank Ennis, ASHGATe Publishing Limited.
- Ahmah Salim (1982). *Land Use Control in Peninsular Malaysia*. University of Wales, Cardiff (U.K): Master's Thesis.
- Allinson, J. and Askew, J. (1996). Planning gain, In: Greed, C. (Ed.) (1996) *Implementing town planning: The role of town planning in development process*. Harlow: Longman.
- Allinson, J. and Claydon, J. (1996). The procedural context, In: Greed, C. (Ed.) (1996) *Implementing town planning: The role of town planning in development process*. Harlow: Longman.
- Allmendinger, P. and Thomas, H. (1998). *Urban planning and the British New Right*. Published by Routledge.
- Altshuler and Gomez, J. A. (1993). *Regulations for Revenue: The political Economy of Land Development Exactions*. Washington D.C.: The Brookings Institution.
- Asenova, D., and Beck, M. (2003). Scottish Local Authorities and the procurement of Private Finance Initiative projects: a pattern of developing risk management expertise? In: *Public Works Management & Policy*, Vol. 8 No. 1, July 2003 11-37. Sage Publications.

- Asiah Othman (1999). *The effect of planning system on housing development: a study of developers' behavior in Kuala Lumpur and Johor Bahru, Malaysia*. Ph.D. Thesis. University of Aberdeen, U.K.
- Australia National Office of Local Government (2003). *Guidelines for Local Government Infrastructure Financing Manual (Australia) Final Report*.
- Azizi, M. M., (1995). The provision of urban infrastructure in Iran: an empirical evaluation. In *Urban Studies*, Vol. 32, No. 3, 507-522.
- Babbie, E. (1998). *The Practice of Social Research*, (8<sup>th</sup>. Ed.). Wadsworth Publishing Company.
- Balchin, N. P, Sýkora, L. and Gregory H. B. (1999). *Regional policy and planning in Europe*. Published by Routledge.
- Batley, R. and Devas, N. (1988). The management of urban development: Current issues for aid donors. In *Habitat International, Volume 12, Issue 3, Pages 173-186*.
- Begg, I. (2002). *Urban competitiveness: policies for dynamic cities*. Published by The Policy Press.
- Bell, J. (1998). *Doing Your Research Project: A Guide for First-Time Research in Education and Social Science* (Second Edition), London: Open University Press.
- Berger, R. M., and Patchner, M. A. (1988). *Planning for Research: A Guide for the Helping Professions*, Sage Human Services Guide 50, Newbury Park: Sage Publications.

- Biehl, D. (1986). *The Contribution of Infrastructure to Regional Development*, Office for Official Publications of the European Communities, Luxembourg.
- Biehl, D. (ed), 1991, The role of infrastructure in regional development. In: Vickerman, R. ed. *Infrastructure and Regional Development*. Pion, London.
- Birnie, J. (1999). Private finance initiative (PFI): UK construction industry response. In *Journal of Construction Procurement*, 1(5), 5-14.
- Booth, P. (1996). *Controlling Development: Certainty and Discretion in Europe, the USA and Hong Kong*. London: UCL Press.
- Booth, P. (1999). From Regulation to Discretion: The Evolution of Development Control in The British Planning System 1909–1947. *Planning Perspectives*, 14 (1999) 277–289
- Bo-Sin Tang, Lennon, H. T. Choy and Joshua, K. F. Wat (2000). Certainty and discretion in planning control: a case study of office development in Hong Kong, In: *Urban Studies*, Vol. 37, No. 13, pp. 2465-2483.
- Bruton, M. J. (2007). *Malaysia: The Planning of a Nation*. Kuala Lumpur: Malaysian Association of Town and Country Planning.
- Bryman, A. (2000). *Quantity and Quality in Social Research*, London: Routledge.
- Bulmer, M. (1983). *Interviewing and field organisation*, in M. Bulmer and D. P. Warwick (eds.) *Social Research in Developing Countries*, Chichester: John Wiley and Sons.

- Bunnell, G. (1995). Planning gain in theory and practice: negotiation of agreements in Cambridgeshire, In: *Progress in Planning*, Vol. 44, pp. 1-113. Elsevier Science Ltd.
- Burke, G and Taylor, T. (1990). *Town Planning and the Surveyor*. The College of Estate Management.
- Cardew, R. (2003). Privatisation of infrastructure in Sydney, Australia, In: *Infrastructure Provision and the Negotiating Process*, edited by Frank Ennis, ASHGATe Publishing Limited.
- Carmona, M. and Sieh, L. (2004). Measuring quality in planning: managing the performance process. Published by Taylor & Francis.
- Carroll, P., and Steane, P. (2000). Public-private partnerships: Sectoral perspective. In *Public-Private Partnerships: Theory and practice in international perspective*. Routledge. London and New York.
- Chan, Lawrence (1997). Government housing policies and incentives: the industry viewpoint. Paper presented at *National Housing Convention*. Kuala Lumpur.
- Choguill, C. F. (1995). Issues in urban development: Case studies from Indonesia: Edited by Peter J M Nas *Research School CNWS, Leiden, The Netherlands (1995) 293 pp Cities, Volume 14, Issue 1, February 1997, Pages 45-46.*
- Choguill, C. L. (1996). Ten steps to sustainable Infrastructure. In: *Habitat International*, Vol. 20, No. 3, pp. 389-404. Elsevier Science Ltd.

- Chung (1986). *The Role of Town Planning in National Development*, a paper presented at National Seminar in Planning, organised by ITM.
- Clark, G. L., and Evans, J. (1998). The private Provision of Urban Infrastructure: Financial Intermediation Through Long-Term Contracts, In: *Urban Studies*, pp. 301-319.
- Clarke, A. and Dawson, R. (1999). *Evaluation Research: An introduction to Principles, Method and Practice*. Sage Publications.
- Clarke, G. (1992). Towards appropriate forms of urban spatial planning. In: *Habitat International*. Vol. 16, pp.146-166.
- Claydon, J. (1996). Negotiations in planning. In Greed, C. (1996). *Implementing of Town: The Role of Town Planning in the Development Process*. Longman. pp. 110-120. Harlow: Longman.
- Claydon, J. (2001). *Discretion in development control: A study of how discretion is exercised in the conduct of development control in England and Wales*. Planning Practice and Research.
- Claydon, J., and Smith, B. (1997). Negotiating Planning Gains Through the British Development Control System, In: *Urban Studies*, pp. 2003-2022.
- Crano, W. D., and Brewer, M. B. (1986). *Principles and Methods of Social Research*. Massachusetts: Allyn and Bacon, Inc.
- Crow, P. (1998). Planning gain: there must be a better way, In: *Planning Perspectives*, 13, pp. 357-372.

Cullingworth, J. B. and Nadin, V. (1997). *Town and Country Planning in the UK*. Published by Routledge.

Dani Salleh (2000). *The legislative framework of urban planning and development in Malaysia*, a paper presented at the World Conference of Urban Future 2000 at the University of Witwatersrand, Johannesburg, South Africa on 10-14 July 2000.

Dani Salleh and Asan-Ali Golam-Hassan (2001). *Urbanisation and Development: The Role of Development Planning in Malaysia*, a paper presented at The International Planning Research Conference 2001, Co-organised by Liverpool University And Liverpool John Moores University, 2001.

Davies, H. W. E., D. Edwards, A.R. Rowley (1996). The relationship between development plans, development control and appeal. *The Planner*.

De Vaus, D. A. (1986) *Surveys in Social Research*, London: George Allen and Unwin.

Denzin, N. K., and Lincoln, S. Y. (1998). *Collecting and Interpreting Qualitative Materials*. Sage Publication.

Development Control Standards Manual (1998). *State Government of Sarawak*: Ministry of Planning and Resource Management.

Dilworth, R. (2001). *Paving bodies politics: Government fragmentation and infrastructural development in the American metropolis*. Ph.D. Thesis. The Johns Hopkins University, Baltimore, Maryland.

- Dimitriou, H. T. (1991). An integrated approach to urban infrastructure development: a review of the Indonesian experience. In *Cities*. Vol. 8, Issue 3, Pages 193-208.
- Dobry, G. (1975). *Review of Development Control System*, Final Report, H.M.S.O. London.
- Dowall, D. E. (2000). California's Infrastructure Policy for the 21<sup>st</sup>. Century: Issues and Opportunities. Public Policy Institute of California.
- Drakakis-Smith, D. W. (1992). Urban and regional change in southern Africa. Published by Routledge.
- Economic Planning Unit (1993). *National Urban Policy*, Government of Malaysia, Kuala Lumpur.
- Elson, M. (1990). *Negotiating the future: Planning gain in the 1990s*, ARC Ltd.
- Ennis, F. (1994). Planning obligations in development plans, In *Land Use Policy* Vol. 11, Issues 3, July 1994, pp. 195-207.
- \_\_\_\_\_ (1996). Planning obligations and developers: cost and benefits, In: *Town Planning Review*, 67(2), pp. 145-160.
- \_\_\_\_\_ (1997). Infrastructure Provision, the Negotiating Process and the Planner's Role. Routledge, Volume 34, Number 12 / December 1, 1997 (1935 - 1954).



\_\_\_\_\_ (2003). Infrastructure provision and the urban environment, In: Ennis, F. (2003). *Infrastructure Provision and Negotiating Process*, London, Ashgate.

Erik-Hans Klijn and Geert R. Teisman (2000). Governing public-private partnerships: Analysing and managing the processes and institutional. In: *Public-Private Partnerships: Theory and practice in international perspective*. Routledge. London and New York.

Esterberg, K. G. (2002). *Qualitative Methods in Social Science Research*.

Eziyi O. Ibem, E. O. (2009). Community-led infrastructure provision in low-income urban communities in developing countries: a study on Ohafia, Nigeria. In *Cities*. Vol. 26, Issue 3, Pages 125-132.

Federal Department of Town and Country Planning, (1993). *Manual for Development Plans Preparation*, Kuala Lumpur.

Fordham, R. (1989). Planning gain: towards its codification. *Journal of Planning and Environment Law*, August, 577-584.

Foziah Johar (1989). *An Evaluation of Malaysia Town Planning Legislation*. Master Thesis. University of Newcastle Upon Tyne, U.K.

Friedmann, J., and Weaver, C. (1979). *Territory and Function: The Evolution of Regional Planning*, London: Edward Arnold.

Garwood, J. (1995). Public-private investment partnership. In: Haydn Shaughnessy (1995). *Project Finance in Europe*. (Eds). John Willey & Sons.

- Ghani Salleh and Choong Lai Chai (1997). Low Cost Housing: Issues and Problems. In: *Housing the Nation: A Definitive Study*. Cagamas Berhad.
- Glaister, S. (1999). Past abuse and future uses of private finance and public-private partnership in transportation. In: *Public Money and Management*, 19(3), 29-36.
- Glennie, C. (1982). A Model for the Development of a Self-Help Water Supply Program, World Bank Technical Paper No. 2, (Technology Advisory Group of the World Bank, Washington, DC.
- Goh, B. L. (1991). *Urban Planning in Malaysia: History, Assumptions and Issues*, Tempo Publishing (M) Sdn. Bhd.
- Goh, B. L. (1994). Urban land management, In: *Malaysia: An Overview*. UMP - Asia Occasional Paper No. 11.
- Golland, A. (1998). *System of Housing supply and Housing Production in Europe: A comparison of the United Kingdom, the Netherland and Germany*. England: Ashagate.
- Goodchild, B. (1997). *Housing and the Urban Environment: A Guide to Housing Design, Renewal and Urban Planning*. Published by Wiley-Blackwell.
- Graeme Evans, G. (2001). *Cultural planning, an urban renaissance?* Published by Routledge.

- Graham, S. and Marvin, S. (2001). *Splintering Urbanism: Networked Infrastructures, Technological Mobilities, and the Urban Condition*. New York: Routledge.
- Graziano, A. M., and Raulin, M. L. (1989). *Research Methods: A Process of Inquiry*, New York: Harper and Row.
- Greed, C. (1996). Implementation: Perspectives and perceptions. In: Greed, C. (ed.). *Implementing Town Planning: The Role of Town Planning in the Development Process*. Harlow: Longman.
- Guy, S. and Marvin, S. (1997). Infrastructure provision, development process and the co-production of environment value, In: *Urban Studies*, pp. 2023-2036.
- Hague, P. (1993). *Questionnaire Design*, Kogan Page, London.
- Hall, P. (1974). *Urban and Regional Planning*, Perquin.
- Hall, P. G. and Pfeiffer, U. (2000). Urban future 21: a global agenda for twenty-first century cities. Published by Taylor & Francis.
- Hallmans, B. and Stenberg, C. (1999). Introduction to BOOT. In Elsevier, Vol.123 (pp. 109-114). In: *Progress in Planning*, Vol. 44, pp. 1-113, 1995. Elsevier Science Ltd.
- Hamzah Sendut (1965). *Toward A National Urbanization Policy*, Penang, USM.

- Healey, P. (1991). Models of the development process: a review, *Journal of Property Research*, 8, pp. 219-238.
- Healey, P. (1992). An institutional model of the land development process, In: *Journal of Property Research*, 9, pp. 33-44.
- Healey, P. (1997). *Collaborative Planning*. Basingstoke: Macmillan.
- Healey, P. (2003). Collaborative Planning in Perspective, In: *Planning Theory*, Vol. 2, No. 2, 101-123.
- Healey, P., Purdue, M. and Ennis, F. (1993). *Gains from Planning?* York: Joseph Rowntree Foundation.
- Healey, P., Purdue, M. and Ennis, F. (1996). Negotiating development: planning gain and mitigating impacts, In: *Journal of Property Research*, 13, pp. 143-160.
- Healey, P., Purdue, M., and Ennis, F. (1995). *Negotiating Development: Rationales and Practice for Development Obligations and planning Gain*. London: E & FN Spon.
- Heap, D., and Ward, A. (1980). Planning bargaining - the pros and cons: or, how much can the system stand? In: *Journal of Planning Environment Law*, 631-637.
- Helmsing, A. H. J. (2001). Local Economic Development: New generation of actors, policies and instruments, a summary report prepared for the *UNCDF Symposium on Decentralization Local Government in Africa* at Cape Town Symposium.

- Hendrik W. Van Der Kamp (2003). Infrastructure and negotiation: the case of Ireland. In: Ennis, F. (2003). *Infrastructure Provision and Negotiating Process*, London: Ashgate.
- Ho Chin Siong (2001). Planning System in Japan. A paper presented at *Seminar Towards Strengthening the Planning System in Malaysia*. Organised by Universiti Teknologi Malaysia.
- HO, K.M et. al. (1989). *A Functional Urban Hierarchy for National Development*, FDTCP, Kuala Lumpur.
- Hodge, I., and Cameron, G. (1989). Raising infrastructure charges on land development: incidence and adjustments. In: *Land Development Studies* 6, 171-182.
- Housing Development Board (1989). *Annual Report 1988/89*, Singapore.
- Howe, J. (1998). Impact of rural road on poverty alleviation in developing countries. In: *Proceedings of the Third International Workshop on Secondary Rural Roads*, Jozefow, Poland, pp. 13-34.
- Inger Krantz (1990). Urban infrastructure: four perspectives on Swedish development. In *Tunnelling and Underground Space Technology*. Vol. 5, Issue 4, Pages 367-373.
- Jaarsm, C.F., and Van Dijk, T. (2002). Financing local rural road maintenance: Who should pay what share and why. In: *Transportation Research*, Pergamon.

- Jack W. Lillywhite (1992). Infrastructure privatisation: A viable option for improving municipal services, a paper presented at Pacific Asian Congress of Municipalities, Calgary, Canada.
- Jayarajan, T.M., (1992). Prospects and Perspectives of Privatising Kuala Lumpur's Sewerage and Transportation Infrastructure, a paper presented at Pacific Asian Congress of Municipalities, Calgary, Canada.
- Joardar, D. S. (1998). Carrying Capacities and Standards as Bases Towards Urban Infrastructure Planning in India: a Case of Urban Water Supply and Sanitation. In *Habitat International*. Vol. 22, Issue 3, Pages 327-337.
- Jowell, J. (1970). Bargaining in development control. In: *Journal of Planning and Environment Law*, pp.414-433.
- Jowell, J. and Grant, M. (1983). Guide-line for planning gain, In: *Journal of Planning and Environment Law*, pp. 427-431.
- JPBD (1994). Urbanisation in Malaysia, a paper presented at *Regional Workshop on Urbanisation Strategies and Local Development in the context of Decentralisation*. 26-29 September 1994. Bandung, Indonesia.
- Kamal Salih (1979). *Urban Development in Malaysia*, Nagoya, Japan: United Nation Centre for Regional Development, Working Paper No. 74-3.
- Kaplinksky, E. S. (1999). *An Evaluation of Development Charges and their Alternatives in Israel and in Ontario*. Master Thesis. University of Toronto, Canada.

- Keeble, L. (1969). *Principles and Practice of Town and Country Planning* (4th. Ed. 1969).
- Keogh, G. (1985). The economics of planning gain. In: S. Barrett and P. Healey (eds.), *Land Policy Problems and Alternatives*, pp. 203-228. Gower Publishing Co. Ltd. Aldershot, Hants.
- Kerajaan Malaysia Malaysia, (1976). *Town and Country Planning Acts*, Acts 172.
- Kerlinger, F. N. (1973). *Foundations of Behavioural Research*, (2<sup>nd</sup>. Ed.), London: Holt, Rinehart and Winston.
- Khairiah Talha, (1999). *Delivering Physical Development : The Dilemma of Supply and Demand*, a paper presented at Seminar on Urbanisation Development, 15-16 November 1999 Organised by District council of Manjung and Perak Branch Campus of UiTM.
- Kirk, R and Wall, A. (2001). Substance, form and PFI contracts, In: *Public Money and Management*, 21(3), 41-46.
- Kirwan, R. (1989) Finance for urban public infrastructure, In: *Urban Studies*, 26, pp. 285-300.
- Kivell, P. (1993). *Land and City: Patterns and Processes of Urban Change*. Routledge, London.
- Klosterman, R.E. (1996). Arguments for and against planning, In: S. Campell and S. Fainstein (Eds) *Reading in Planning Theory*, pp. 150-168. Malden, MA: Blackwell.

- Kotin, A., and Peiser, R. (1997). Public-Private Joint Ventures for High Volume Retailers : Who Benefits? In: *Urban Studies*, pp. 1971-1988.
- Kulwant, S. and Steinberg, F. (1999). Integrated urban infrastructure development in Asia. In *Habitat International*. Vol. 20, Issue 1, 1996, Pages 1-3. Published by Elsevier Science Ltd.
- Kyung-Hwan Kim (1997). Improving local government finance in a changing environment. In *Habitat International*. Vol. 21, Issue 1, Pages 17-28.
- Larkham, P.J. (1990). The concept of delay in development control. In: *Planning Outlook*.
- Lee Lik Meng, Abdul Mutalip Abdullah dan Alip Rahim, (1990). *Town Planning in Malaysia: History and Legislation*. Published by University Sains Malaysia.
- Lee, Cassey (1995). *Regulatory Reform in the Infrastructure Sector: The Malaysian Experience*, a paper presented at the Regional Workshop on Managing Regulatory Policies and Reforms in East Asia, Kuala Lumpur.
- Lee, Cassey (1995). Regulatory Reform in the Infrastructure Sector: The Malaysian Experience, a paper presented at the Regional Workshop on Managing Regulatory Policies and Reforms in East Asia, Kuala Lumpur.
- Leo van den Berg, Erik Braun and J. van der Meer (2007). National Policy Responses to Urban Challenges in Europe. European Institute for Comparative Urban Research. Published by Ashgate Publishing, Ltd.



Lichfield, N. (1989). From planning gain to community benefit. *Journal of Planning and Environmental Law* (January):68–81.

\_\_\_\_\_, (1990). Planning gain: In search of a concept. In: *Town and Country Planning* 56(6):178–180.

\_\_\_\_\_, (1992a). *The integration of development planning and environmental assessment*. Part 2: A case study. *Project Appraisal* 7(3).

\_\_\_\_\_, (1992b). From planning obligations to community benefit. *Journal of Planning and Environmental Law* (December):1103–1118.

\_\_\_\_\_. 1996. *Community impact evaluation*. London: UCL Press.

London Housing (2001). Think again on planning gain? December 2001.

MacDonald, J. S. (1979). *Planning implementation and social policy: an evaluation of Ciudad Guyana 1965 and 1975*, In: *Planning Progress*, Vol.11.

Mahamad Tayib (1996). *Local Authority in Malaysia: Problem and Management*, In: *Jurnal Universiti Utara Malaysia*.

Majlis Perbandaran Pulau Pinang, (1987) Rancangan Struktur Majlis Perbandaran Pulau Pinang.

Malaysia (1974). Street, Drainage and Building Acts, Act 133.

\_\_\_\_\_, (1976). Town and Country Planning Acts, Act 172.

\_\_\_\_\_, (1982). Federal Territory (Planning) Act, Act 267.

\_\_\_\_\_, (1996). *Seventh Malaysia Plan (1996-2000)*. Kuala Lumpur: National Printing Department.

\_\_\_\_\_, (2001). *Eight Malaysia Plan (2001-2005)*. Kuala Lumpur: National Printing Department.

\_\_\_\_\_, (2006). *Ninth Malaysia Plan (2006-2010)*. Kuala Lumpur: National Printing Department.

Marsh, C. (1989). Negotiated planning permission and planning gain. In: R. Grower (ed.), *Land and Property Development: New Directions*, pp. 153-167, Gower Publishing Co. Ltd.

McCarthy, P., Prism, R., and Harisson, T. (1995). *Attitudes to Town and Country Planning*. London : HMSO.

McGill, R. (1994). Integrated urban management: an operational model for third world city managers. In *Cities*, Vol. 11, Issue 1, Pages 35-47.

McGill, R. (1998). Urban management in developing countries. In *Cities*, Vol. 15, No. 6, pp. 463-471. Published by Elsevier Science Ltd.

McKinlay Douglas Limited, Brent Wheeler & Co (1996). *Liberalising the Regulation of Governments' Infrastructure: An Issues Paper*.

McLoughlin, J.B. (1985). *Control and Urban Planning*. London: Faber & Feber Ltd.

- McNeill, J., and Dollery, B. (1999). *Funding Urban Infrastructure Using Developer Charges: The Case of Section 94 Contributions and Road Financing in New South Wales*. University of New England School of Economic Studies No. 99-9 December 1999 Working Paper Series in Economics.
- Megginson, W., Nash, R. and Randenborgh, M. (1994). The financial and operating performance of newly privatised firms: an international empirical analysis, In: *Journal of Finance*, Vol. 49, No. 2, pp. 403-52.
- Ministry of Housing and Local Government, Welsh Office (1970). *Development Plans: A Manual on Form and Content*, London.
- Mohd. Anuar A. Wahab (1994). *An Overview of the Development Control System in Peninsular Malaysia*. Occasional Paper No. 4, 1994. Faculty of Built Environment, Universiti Teknologi Malaysia.
- Morgan, P. H., and Nott, S. M. (1988). *Development Control: Policy into Practice*, Butterworth : London.
- Moser, C. A. and Kalton, G. (1971). *Survey Methods in Social Investigation*, London: Heinemann Educational Books.
- Muhammad Nong (1990). Financing urban infrastructure: Trends and issues, a paper presented at *National Planning Conference*. Jointly organised by MIP and JPBD.
- Municipal Council of Penang Island (1987). Strategies formulating general policies and proposal for socio-economic and physical development Plans (MPPP).

- Nakagawa, D., Matsunaka, R., Konishi, H. (1998). A method of classification of financial resources for transportation based on the concept of actual payers. Theoretical framework. In: *Transport Policy*, 5, 103-113.
- National Office of Local Government of Australia (NOLG), (2002). Guidelines for Preparing a Local Government Infrastructure Financing Manual.
- Nedovic-Budic, Z. (2001). Adjustment of planning practice to the New Eastern and Central European context. In: *Journal of the American Planning Association*.
- Nelson, A.C. (1988). *Development impact fees*. Chicago: Planning Press.
- Nelson, K. C., Bengston, N. D., and Fletcher, J. O. (2004). Public policies for managing urban growth and protecting open space: policy instruments and lessons learned in the United States, In: *Landscape and Urban Planning*, Vol. 69, Issues 2-3, 15 August 2004, Pages 271-286.
- Neuman, W. L. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*, 6<sup>th</sup>. Ed. Pearson.
- Norman, K. D., and Yvonna, S. L. (1998). *Collecting and Interpreting Qualitative Materials*. Sage Publication.
- OECD (1991). *Urban Infrastructure: Finance and Management*. Paris. Organisation for Economic Co-Operation and development.

Osman Mohd Ali (1990). Development control guidelines: managing the physical development of Federal Territory, a paper presented at *National Planning Conference on Challenges and Opportunities* in Urban Development: Preparing for Growth in the 1990's. Jointly organised by Federal Department of Town and Country Planning, Malaysian Institute of Planners and Institute of Landscape Architects Malaysia, 8-9th. November 1990.

Othman Yeop Abdullah, (1988). *Administrative Machinery for Development*. Jabatan Perdana Menteri: Unit Pemodenan Tadbiran Malaysia (MAMPU).

Owen, G., and Merna, A. (1997). The private finance initiative: In: *Engineering Construction and Architecture Management*, 4(3), 163-177.

PAG (1980) *Report to Department of the Environment on Planning Gain*. London: HMSO. Pages 244-258.

Peter, B. P. and Michael J. T. (2005). Urban environmentalism: global change and the mediation of local conflict. Published by Routledge.

Philip, L. J. (1998). Integrating Quantitative and Qualitative Approaches to Social Research in Human Geography - an Impossible Mixture? In: *Environment and Planning A*. 30(2) 261-276.

Porter, D. R. (1989). The relation of development agreements to plans and planning. In: Porter, D. R., and Marsh, L.L. (eds.), *Development agreements: Practice, Policy and Prospects*, pp. 148-152, The Urban Land Institute, Washington.

Private Financing for Government Projects. (2004, June 5). *The Star*. pp.7.

Public Policy Institute of California (2000). Rethinking Infrastructure Policy for the 21<sup>st</sup>. Century. In: *Research Brief*. June 2000: Issue 3.

Public-Private Infrastructure Advisory Facility, World Bank (2005). Private solutions for infrastructure in Lesotho. Published by World Bank Publications.

Ragin, C. C. (1994). *Constructing Social Research*. Thousand Oaks, CA: Pine Forge Press.

Ratcliffe, J., Stubbs, M. and Shepherd, M. (2001). *Urban Planning and Real Estate Development*. London: UCL Press.

Roger Caves, R. and J. Barry Cullingworth, J. B. (2008). *Planning in the USA*. Published by Taylor & Francis.

Ronald McGill (1998). Urban management in developing countries. In: *Cities*, Vol. 15, No. 6, pp. 463-471. Published by Elsevier Science Ltd.

Ronaldo, W. M. (2000). The theory of partnership: why have partnership? In *Public-Private Partnerships: Theory and practice in international perspective*. Routledge. London and New York.

Rossi, P. H., Wright, J. D., and Anderson, A. B. (1983). *Handbook of Survey Research*. Academic Press New York.

- Rowan-Robinson, J., and Durman, R. (1993). Planning policy and planning agreements, In: *Land Use Policy*, Volume 10, Issue 3, pp. 197-240.
- Rowan-Robison, J. and Lyod, G. (1988). *Land Development and the infrastructure lottery*, T and T Clerk, Edinburgh.
- Rydin, Y. (1993) *The British Planning System: An Introduction*, London: Macmillan.
- Sady, E.J., (1962). Improvement of Local Government and Administration for 1962 Development Purpose. In: *Journal of Local Administration Overseas*.
- Sagalyn, L.B., (1997). Negotiating for Public benefits : The Bargaining Calculus of Public-Private development, in : *Urban Studies*, pp. 1955-1970.
- Saxer, S. R. ( 2000). Planning gain, exactions and impact fees: A comparative study of planning law in England, Wales and the United States. In: *The Urban Lawyer*, 32(1).
- Shapira, P., Masser, I. and Edgington, W. D. (1994). Planning for cities and regions in Japan. Published by Liverpool University Press.
- Sheoli Pargal (2003). *Regulation and Private Sector Investment in Infrastructure: Evidence from Latin America*. World Bank Policy Research Working Paper 3037.
- Short, J. R., Fleming, S., and Witt, S. (1983). *Housebuilding, Planning and Coomunity Action*. London: Routledge.

- Sidabutar, P., Rukmana, N., Hoff, R. V. D., Steinberg, F. (1991). Development of urban management capacities: training for integrated urban infrastructure development in Indonesia. In *Cities*, Vol. 8, Issue 2, Pages 142-150.
- Sidney, M. L. (1996). *Build Operate Transfer: Paving the way for tomorrow's infrastructure*. John Wiley & Sons, Inc.
- Silverman, D. (2005). *Doing Qualitative Research*. London: Sage Publication.
- Simpson, B. (1983). *Sites Cost in Housing and Development*. London: Construction Press.
- Singh, J.P, Jena, S.N. (2005). The pressure on urban infrastructure: need to revamp the planning philosophy. Paper presented at *Indian Building Congress's 8th Annual Convention and National Seminar on Urban Infrastructure Development*.
- Smith, A. J. (1999). *Privatised Infrastructure: The Role of Government*. London: Thomas Telford.
- Smoke, P. and Lewis, B. D. (1996). Fiscal decentralization in Indonesia: a new approach to an old idea. In *World Development*. Vol. 24, Issue 8, Pages 1281-1299.
- Snyder, T. P., and Stegman, M.A. (1987). *Paying for growth: Using development fees to finance infrastructure*, Washington, DC: Urban Land Institute.
- Society for Advanced Legal Studies (1998). *Report of working group on planning obligations*. London: Society for Advanced Legal Studies.



- Southgate, M. 1998. Sustainable planning in practice. *Town and Country Planning* 67(11); In: *Urban Studies* (December): 332–342.
- Steinberg, F. (1992). Urban infrastructure development in Indonesia. In *Habitat International*. Vol. 15, Issue 4, 1991, Pages 3-26. Published by Elsevier Science Ltd.
- Stephen, P. O., and Murray, V. (2000). Understanding the process of public-private partnerships. In: *Public-Private Partnerships: Theory and practice in international perspective*. Routledge. London and New York.
- Stewardson, R. (1995). The ‘big picture’ from BHP’s perspective, paper 4 in Investing in Infrastructure, Workshop Papers 5, Australian Urban & Regional Development Review.
- Supian Ahmad and Mansor Ibrahim, (1990). *Town Planning Education in Malaysia: Past, Present and Future Directions*. Occasional Paper, 1990. Faculty of Built Environment, Universiti Teknologi Malaysia.
- Sylte, O. K. (1996). Review on the road sector in selected common market for Eastern and Southern Africa (COMESA) countries. Working Paper No. 23. The World Bank and Economic Commission for Africa, Washington DC.
- Takahashi, T. (1998). On the optimal policy of regional infrastructure provision across regions. In *Regional Science and Urban Economic*, Vol. 28, pp. 213-235. Elsevier Science Ltd.
- Thomas, K. (1997). *Development Control: Principles and Practice*: UCL Press.

- Thompson, S. (2007). *Planning Australia: An Overview of Urban and Regional Planning*. Published by Cambridge University Press.
- Tomalty, R., and Skaburskis, A. (1997). Negotiating development charges in Ontario, in: *Urban Studies*, pp. 1987-2002.
- Troy, N. P. (1996). The perils of urban consolidation: a discussion of Australian housing and urban development policies. Published by Federation Press.
- Underwood, J. (1981). Development control: A review of research and current issues, In: *Progress in Planning*, Vol. 16, pp. 179-242. Pergamon Press Ltd. Printed in Great Britain.
- United Nations Human Settlements Programme (2005). *Financing urban shelter: global report on human settlements 2005*. Published by UN-HABITAT.
- Utah Governor's Office of Planning and Budget (2004)
- Verhage, R. and Needham, B. (1997). Negotiating about the residential environment: it is not only money that matters, In: *Urban Studies*, pp. 2053-2068.
- Vickerman, R. (1995). The channel tunnel: the case for private sector provision of public infrastructure, in Banister, D. ed. *Transport and Urban Development*, Chapman and Hall, London, pp. 96-122.
- Vickerman, R. (2002). Public and Private Initiatives in Infrastructure Provision, a paper presented at STELLA Workshop, Brussels, 26-27 April 2002. Centre for European, Regional and Transport Economics University of Kent at Canterbury.

- Vives, A. (1996). *Private Infrastructure: Ten Commandments for Sustainability*. Inter-American Development Bank.
- Webb, R. (2004). The Commonwealth Government's Role in Infrastructure Provision. Department of Parliamentary Services of Australia. Research Paper No. 8 2003-2004.
- Wegelin, A. E. (1990). New approaches in urban services delivery: a comparison of emerging experience in selected Asian countries. In *Cities*. Vol. 7, Issue 3,
- Willis, G. K., Turner, K. R. and Bateman, I. (2007). Urban planning and management. Published by Edward Elgar.
- Wills, K. G. (1995). Judging Development Control Decisions. In *Urban Studies*. Vol. 32, No. 7, 1995, pp. 1065-1079.
- Wong, C. (1997). Financing local government in the People's Republic of China. Published for the Asian Development Bank by Oxford University Press.
- Wood, W. (1985). *Planning and the Law: A Guide to the Town and Country Planning Act*.
- Yaacob, Y., and Naidu, G. (2000). Contracting for private provision of infrastructure: The Malaysian experience. In: Harinder Kohli, Ashoka Mody and Michael Walton (2000). *Choices for Efficient Private Infrastructure Provision in East Asia*. (Eds.). The World Bank, Washington, D.C.

Yaakup, A., Johar, F., Sulaiman, S., and Hassan, R. (2003). GIS and Development Control System for a Local Authority in Malaysia, In: *Habitat International*. 27 (2003) 683-696 : Pergomon Press Ltd.

Zietlow, G. J., and Bull, A. (1999). Reform of financing of road funds in Latin America, a paper presented on the XXI World Road Congress, Kuala Lumpur.