TRANSPORT AND HOUSING SECURITY IN THE KLANG VALLEY, MALAYSIA

Paul Barter
Department of Geography, National University of Singapore, Singapore

ABSTRACT

This paper explores links between transport and housing security issues for the urban poor using the example of the Klang Valley in Malaysia. The interface between these issues is identified as a gap in the literature, including policy debates, on both housing and transport. A number of linkages are shown to be important and likely to be relevant in many cities of the South, especially those with rapid motorisation and large numbers of "squatters". A simple framework for understanding these linkages is presented. Key examples include displacement to make way for transport infrastructure and the impact on transport problems for the poor of policies affecting the location of urban poor housing, including relocation sites and transit accommodation. The case study of the Klang Valley is used to illustrate and test the relevance of a focus on this issue and the utility of the conceptual framework. Some policy implications of the investigation and case study are suggested.

Keywords: urban transport, housing security, eviction, relocation, urban poor, Malaysia

INTRODUCTION

Much has been written about both housing and transport problems for people living in poverty in the urban areas of the South. However, this paper focuses on part of the somewhat neglected intersection between these issues, in particular, connections between transport and housing security, using the example of the Klang Valley, Kuala Lumpur's metropolitan region.

The problem of a lack of secure, affordable housing in accessible locations for the urban poor persists as a key issue for cities in the South, not least in much of Asia, where rapid urbanisation is continuing and large numbers of people live in "squatter settlements" characterised by poor security of tenure. The "slum clearance" approach to the issue has long been rejected in the literature for causing numerous undesirable outcomes for the people evicted and for having proved ineffective in reducing the problem itself (Aldrich & Sandhu, 1995). Nevertheless, forced evictions continue in large numbers in many places. The issue is further underlined by increasing awareness of the poverty reduction potential of housing initiatives, investment and security of tenure (Anzorena *et al.*, 2000). Urban poverty is treated here as involving more than just low incomes but also, among other things, poor housing, lack of access to services and lack of civil and political rights (Mitlin, 2001).

Expanding cities in the South also face important transport challenges. These are particularly acute in densely populated cities in Asia where motorisation and aspirations for daily mobility[1] are rising quickly (Barter *et al.*, forthcoming). There is a growing body of work on transport deprivation among the urban poor which points to a mutually reinforcing cycle of poverty and transport deprivation (Gannon & Liu, 1997; Hook, 1998). A number of the mechanisms involve housing, particularly access to affordable housing. In addition, the pressure to expand infrastructure in dense urban settings leads directly to displacements, of which the poor are disproportionately the victims.

A motivation for this study is the observation that linkages between transport and urban poor housing represent a gap in policy debates in both fields. For example, the well-established housing rights movement and the associated literature on housing for the poor have rarely paid significant attention to transport policy, except to address specific projects causing evictions. To be fair, the literature on housing has drawn attention to accessibility issues in the location of urban poor housing (as discussed below). However, the idea that urban poor housing issues should be considered when making transport policy choices has rarely been discussed. One possible reason is the tendency for policy discussion to focus on one sector at a time. Another might be the technocratic nature of the transport planning process that makes it difficult for non-experts to question (Dimitriou, 1992), although activists are already contesting this in certain countries.

The interactions between policy in housing and transport run both ways, with housing policy and practice affecting transport, and vice versa. I will briefly discuss a range of the key interactions but my primary focus is on housing security, in particular, the issue of evictions. An underlying aim of this research is to prompt further investigation into the significance of links between livelihoods of the urban poor, housing and transport so that policies and programmes in all three areas can better take these into account.

The next section outlines the methods employed in this research, followed by a discussion of connections between transport and housing security and a conceptual framework clarifying these. Then an overview of the housing and transport situations in the Klang Valley sets the scene for the case study in the final section. This sets out the goals for the investigation of the Klang Valley case and then examines relevant evidence from that city on transport and housing security interactions. The paper concludes with an assessment of the relevance and utility of the conceptual framework and the wider significance of the Malaysian evidence, including a discussion of policy insights.

METHODS

This investigation of the Malaysian situation builds upon ideas in a pilot study (yet to be finalised and published) which reviews urban poor housing and transport linkages internationally. Methods included interviews at relevant conferences with key experts, activists and stakeholders,[2] and a review of literature, including that of non-governmental organisations (NGOs) active in these areas.

The present investigation asks what insights this wider study provides for a focus on transport and housing security in the Klang Valley, and whether the case study suggests a need to further refine the conclusions of the wider study. The focus on the Klang Valley is also motivated and informed by my other research, including an ongoing historical comparative study of the urban transport and land use development of this urban region (Barter, 2000, 2001; Barter *et al.*, forthcoming) that builds upon two earlier international urban transport data compilation projects (Kenworthy & Laube *et al.*, 1999; Kenworthy & Laube, 2001). This data-rich, spatial and transport-oriented perspective has been supplemented for this study by drawing upon the recent news media record and the eviction monitoring and other housing-related activities of the Urban Resource Unit (URU),

Singapore Journal of Tropical Geography, 23(3), 2002, 268-287

a small NGO based in Kuala Lumpur on whose consultative committee I served for two years. These sources provided a Klang Valley database of urban poor housing cases with a transport connection, although some relevant cases may have escaped the reporting efforts of both the Malaysian media and URU.

TRANSPORT AND HOUSING SECURITY

Let me now very briefly canvass some relevant linkages between urban transport and housing for the urban poor which are important background to the subsequent focus on transport linkages with urban poor housing security (including evictions). Underlying a number of the linkages is the dilemma that low-income residents face between satisfying their need for transport or access and their need for affordable and secure housing. One side of the dilemma is their low daily mobility (or lack of affordable mobility); the other is the lack of secure, affordable housing in accessible locations. Low-income households can try to live in inner locations with easy access to income-generating opportunities, but low-cost housing in such locations tends to face highly insecure tenure (for example, see Boonyabancha, 1983). Conversely, they can (and increasingly do) live near the urban fringe where affordable housing may often be more secure, but where they face transport problems, such as inadequate public transport and long travel times. This relates to Turner's observation (cited in Gilbert & Gugler, 1982:86) that households make trade-offs between security, identity and opportunity, with the very poor tending to value most highly proximity to unskilled jobs (opportunity). This is relevant, for example, to policies and practices that influence the location of public housing, sites and services projects, and relocation sites following eviction (Keivani & Werna, 2001.

Other linkages also relate to low daily mobility as a major cause of the access problems faced by the poor, including access to housing (Hook, 1998). For example, spatial segregation of socioeconomic groups can create access problems for the poor (Stretton, 1975:106), and inflexible housing regulations and poorly functioning land markets can reduce the flexibility of low-income households to move house in order to reduce their transport burden (Gannon & Liu, 1997). However, it must be pointed out that simply trying to increase mobility in general, without addressing transport inequity, may not help very much to increase housing choices for the poor. This is because higher private vehicle-based mobility of higher-income groups can encourage footloose land use development patterns and (directly and indirectly) harm the viability of public and non-motorised transport, the modes most important to the poor (Manning, 1984; Hook & Replogle, 1996).

The framework used in this section to understand the main categories, mechanisms and key factors in the interactions between urban poor housing and transport issues, is summarised in Figure 1. The focus is on those issues most relevant to housing security and evictions.

A direct impact: Displacement due to transport infrastructure

I now turn to focus on housing security and transport impacts upon it. Transport infrastructure is a significant direct cause of displacement and evictions in many cities. In the mid-1990s, the World Bank (1994) identified transport as the largest single cause of resettlement in its portfolio of projects, implicating 25 per cent of projects in 1993. Individual large projects or major programmes (such as under a large international loan) can result in very large numbers of people being displaced in a short period of time. An example often cited is the Indonesian Jabotabek First Urban Transport Development Project in the Jakarta region financed by the Bank in the early 1990s (World Bank, 1996). Transport infrastructure is also often the primary cause of resettlement in comprehensive urban

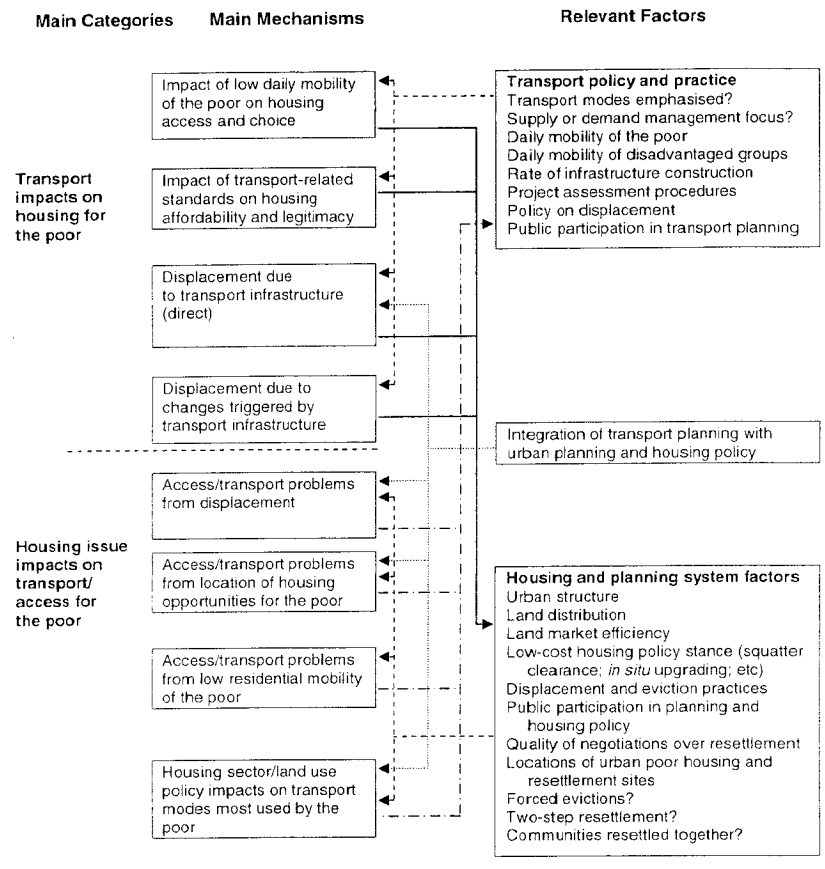

Figure 1. A simple framework for key linkages between transport and urban poor housing.

development projects. In Indonesia, for example, 67 per cent of the resettlement in the Bank's Surabaya Urban Project is associated with transport components (World Bank, 1996). A current dramatic example in Pakistan is the threatened imminent eviction of an estimated 25,400 housing units from an established low-income settlement in Karachi to make way for the Lyari Expressway (URC, 2002).

It seems likely that people displaced for transport infrastructure are disproportionately from among the most vulnerable groups in society with particularly weak housing tenure. Low-income settlements tend to be identified as low-cost, "easily cleared" alignments for new transport routes (Gannon & Liu, 1997; Hook, 1998). In addition, a common location for squatter settlements is on linear reserves of land (such as waterways, power lines and, of course, road and railway reserves) that are attractive for transport projects. It is particularly difficult, if not impossible, for settlers to gain security of tenure on such land (e.g. for Mumbai's 18,000 railway dwellings, according to Patel, 1999).

Preliminary investigations as part of the pilot study suggest that transport-related displacements are likely to be most intense where motorisation is increasing rapidly and there is a high rate of expansion of transport infrastructure, where population densities are high and where there are large populations living without secure tenure. Evictions are also more likely where there is poor protection of housing tenure rights in general. Other factors include transport policies that emphasise highly space consuming modes, such as private cars, versus space-efficient modes, such as high-capacity public transport modes (Bruun & Schiller, 1995).

The attitude to resettlement in transport infrastructure policy seems to be another key. Ideally, infrastructure policy and practice can seek to minimise the number of households displaced as an integral feature. Reforms to assessment procedures for transport projects should also help; for instance, cost-benefit assessments should take explicit account of a much broader range of impacts of displacement beyond just the immediate cost of buying and clearing land (Hook, 1994). Fairly good models for national resettlement policies can now be found in the involuntary resettlement policies of the multilateral lending agencies, provided that these policies are honoured in actual practice. For example, the Asian Development Bank's (1995) policy on involuntary resettlement recommends "that involuntary resettlement be an integral part of project design, dealt with from the earliest stages of the project cycle" (p.10) and that "the absence of formal legal title to land by some affected groups should not be a bar to compensation" (p.11).

Indirect transport impacts on housing security

There are a number of less direct impacts of transport upon housing security for the poor. The first of these is a set of transport examples of excessively high standards and criteria, such as minimum set-back, parking and road right-of-way requirements, that tend to raise the price of land and housing beyond the reach of the poor (Mabogunje *et al.*, 1978). Unrealistic standards are also among the factors that render unplanned housing areas illegal and discourage *in situ* upgrading. Conversely, reforms to provide more realistic or flexible standards can improve the affordability of housing. An example of relevance to middle-income countries is to change parking standards in order to decouple the housing market from the market for parking (Jia & Wachs, 1998).

Gentrification and development pressure are also threats to poor households if their neighbourhoods are suddenly rendered more accessible by transport infrastructure projects. Land values tend to rise in the vicinity of new mass transit stations, or in peri-urban locations newly served by transport infrastructure. If there are no policies for governments to "capture" some of the increase, then landowners will reap a windfall (Ryan, 1999). However, residents without secure tenure, including renters, will be unable to profit and may face both heightened threats of eviction and rising monthly rentals.

Transport and access issues in resettlement practice

We can also look beyond evictions caused directly or indirectly by transport infrastructure to address transport-related issues as a result of displacement, regardless of the cause of the displacement, building on a long literature that has drawn attention to the negative impacts of eviction (for example, as cited by Gilbert & Gugler, 1982:100). A common complaint about resettlement sites worldwide is their lack of accessibility with respect to jobs, services, public facilities and public transport services (Keivani & Werna, 2001). Displacement also reduces access to social support and community-based mutual aid networks when communities are split apart. Further access-related problems result from the fact that many resettlement processes involve two steps, with evicted people being first moved into transit accommodation, and only later to permanent housing, especially if neither transit accommodation nor eventual resettlement sites are close to each other or to the original settlement and if they lack adequate public transport (Patel, 1999).

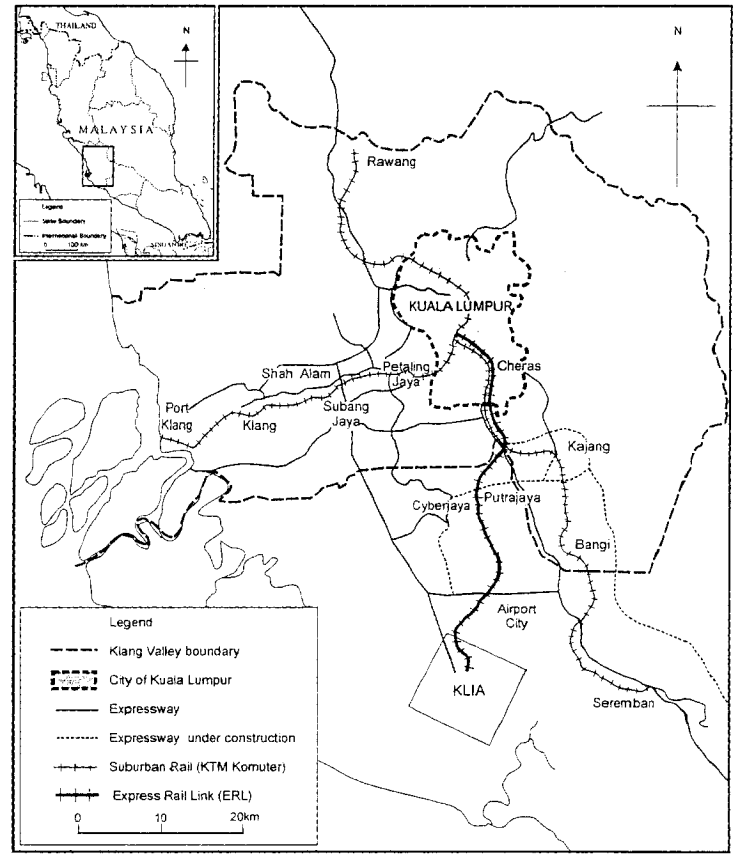

Figure 2. Map of the Klang Valley and environs, showing major transport infrastructure.

HOUSING AND TRANSPORT IN THE KLANG VALLEY

Brief examinations of the transport situation and the status of urban poor housing in the Klang Valley here serve as background to the subsequent discussion of the relevance of the framework in Figure 1 to the Klang Valley. The Klang Valley is Malaysia's pre-eminent urban region, centred upon the Federal Territory of Kuala Lumpur (Figures 2 & 3). Its population has grown rapidly from about 2 million at the 1981 census to 4.5 million, according to the most recent census in 2000. By the mid-1990s it was a middle-income city with a per capita Gross Regional Product (GRP) of about US$7,000 (then about RM17,500) in 1995 prices (Kenworthy & Laube, 2001). The region has a modest urban density of under 60 persons per hectare of urban land use, which is unusually

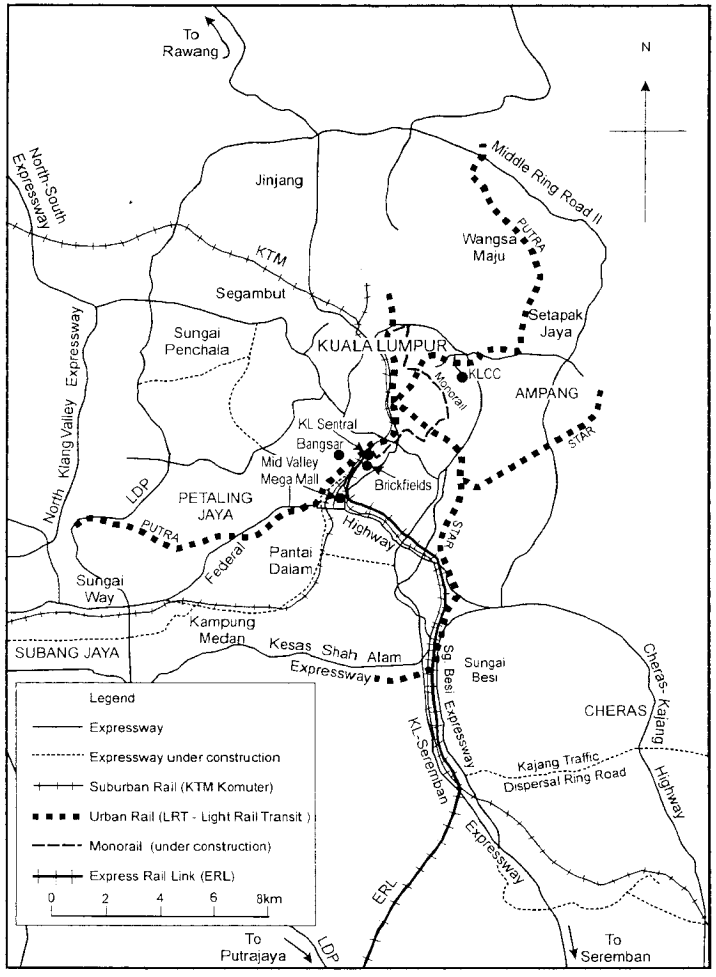

Figure 3. Map of the core of the central part of the Klang Valley, showing details of major transport infrastructure.

low for a large Asian city (Barter *et al.*, forthcoming). The urban structure has tended to become multicentred, developing predominantly via a series of planned new towns (Lee, 1987). This process is continuing with the recent extension of urban development to the south in a corridor that includes the new Federal administrative centre of Putrajaya (Bunnell *et al.*, 2002).

Urban poor housing in the Klang Valley

Although the Klang Valley has seen spectacular urban development, housing for the urban poor remains a critical issue (Morshidi *et al.*, 1999). Official data based on incomes suggest a low incidence of poverty in Malaysia's urban areas at 4.1 per cent in 1995 and 3.9 per cent in 1999 (EPU, 2001:57).

Indicators such as access to formal sector housing tend to paint a somewhat worse picture. The proportion of "squatters" in the Klang Valley remains significant, although it has been gradually reduced from 21 per cent in 1980 to 16.8 per cent in 1985 and 9.2 per cent in 1997 (Bunnell *et al.*, 2002). Syed Husin (1998), however, estimates that almost 20 per cent of the population of the Klang Valley lived in squatter housing in the early 1990s. These figures do not include former squatters living in transit accommodation, in the form of cramped "longhouses", while awaiting permanent low-cost housing. Of the 1,323 urban squatter eviction cases known to URU in 1999, 855 were resettled in longhouses (URU, 2000a) where, in some cases, families remain for many years or even decades (Syed Husin, 1998).

In the 1970s, large numbers of mainly Malay settlers arrived in the cities and were encouraged by ruling coalition political parties to settle on state land (Syed Husin, 1998). Most have been tacitly recognised by municipal authorities through the provision of basic services such as electricity and water. Many therefore prefer the label "urban pioneers" (*peneroka bandar*) instead of "squatters". Former rural plantation workers, mostly of Tamil descent, many having been displaced by the redevelopment of those lands, make up another large group of squatters (Bunnell, 2002), together with other recent rural migrants and immigrants, mainly from Indonesia.

Resettlement of low-income residents for transport infrastructure might not be such a problem if such resettlement always adhered to international standards, such as taking every step possible to minimise the need to resettle people, ensuring full consultation and negotiation with all those affected and making sure that no eviction renders anyone homeless (UN-HABITAT, 1996). However, squatter and transit accommodation communities in urban Malaysia have very weak tenure, and laws do not ensure fair compensation or provision of alternative housing before eviction. As we will see, there is a lack of consistent procedures for dealing with squatters and their compensation and resettlement (URU, 1999b, 2000b; Syed Husin, 1998). Consequently, outcomes vary enormously depending on circumstances and the tactics used by each set of actors involved. Malaysian squatters' insecurity of tenure is reflected in a reluctance to invest in improvements to their houses,that are almost universally of makeshift wooden construction and roofed with galvanised iron. Forced evictions are common and violent evictions not unknown. In 1995, the United Nations' Special Rapporteur on Housing criticised the incidence in Malaysia of evictions without proper resettlement (*Asia Times*, 1999). Negotiations over resettlement commonly involve coercive tactics, including threats and inducements (Syed Husin, 1998). The governments of a number of the most urbanised states have stated targets of zero squatter settlements within a short time horizon, however, low-cost housing has not been promoted vigorously enough to meet the need (Morshidi *et al.*, 1999).

Urban transport in the Klang Valley

Since the mid-1980s, transport in the Klang Valley has been characterised by rapid change resulting from motorisation and high investment in transport infrastructure, particularly expressways and rail systems, most of which has been built by the private sector under build-operate-transfer (BOT) and build-operate (BO) formulae (Gomez & Jomo, 1997). Urban transport planning in this urban region tends to follow a "predict and build" approach, attempting to build enough infrastructure to cope with the demand, with hardly any effort so far to manage demand for transport (Barter, 2001). Transport planning and decision making in Malaysia tend to be conducted as a technocratic process with little or no public participation (Rasagam, 2001). In many cases, minimal information is released to the public until shortly before construction begins.

TABLE 1. SOME KEY TRANSPORT SYSTEM AND LAND USE CHARACTERISTICS IN THE KLANG VALLEY COMPARED WITH MIDDLE-INCOME AND HIGH-INCOME GROUPINGS OF CITIES[1], CIRCA 1995[2]

		USA	WEU	HIA	MIA	MIO	KLANG VALLEY[3]
Metropolitan gross regional product per capita (US$)		$31,386	$32,077	$34,797	$9,776	$6,625	$6,991
Passenger cars per 1,000 persons		587	414	217	198	265	209
Motor cycles per 1,000 persons		13	32	66	154	15	175
Passenger-car passenger km per capita	pass. /capita	18,155	6,202	3,724	3,517	4,133	4,345
Motorcycle passenger km per capita	pass. /capita	45	119	100	1,165	78	1,365
Length of expressway per thousand persons	m/1,000 cap.	156	82	22	27	43	68
Per cent of motorised pass. km on public transport	%	3	19	50	27	37	11
Public transport investment per cent of metro. GRP	%	0.2	0.4	0.5	1.2	0.4	1.1
Road investment per cent of metro. GRP	%	0.9	0.7	1.0	1.3	0.7	1.8
Urban density	persons/hectare	15	55	134	164	54	58

[1]The groupings of cities are as follows: Western and Southern Europe (WEU): 32 cities; United States of America (USA): 10 cities; High-income Asia (HIA): Tokyo, Osaka, Sapporo, Hong Kong, Singapore; Middle-income Asia (MIA): Taipei, Seoul, Klang Valley, Bangkok; Middle-income Other (MIO): Tel Aviv, Prague, Curitiba, Riyadh, Budapest, São Paulo, Johannesburg, Cape Town, Krakow. The choice of members of these groupings, such as the choice of cut-off point between MIA and HIA groups, was informed by hierarchical cluster analysis of the data set (see Barter *et al.*, forthcoming, for more details).
[2]In the case of the Klang Valley, most of these data refer to 1997.
[3]Note that the MIA group includes the Klang Valley.

Source: Kenworthy & Laube (2001).

Data from a recent study (Kenworthy & Laube, 2001) shows that the Klang Valley has rather high levels of mobility by private motorised vehicles relative to its income levels, in contrast to high-income Asian cities (Table 1). Road and parking provision may be particularly relevant to the focus of this paper because both can be voracious consumers of urban space. The Klang Valley stands out among Asian cities for a high level of expressway length per person (68 m per 1,000 people) (Figures 2 & 3). In fact, the spatial density of this expressway network is higher than those found in most North American cities (Barter *et al.*, forthcoming). Parking provision in Kuala Lumpur's central business district (CBD) is also high in international perspective (Kenworthy & Laube, 2001).

Despite the intense road-building efforts, traffic congestion remains acute. In an effort to ameliorate this, there has been a remarkably rapid expansion of the rail network since the early 1990s, from nothing to a system of about 209 km of electrified double-tracked service in 2000 in three major systems – KTM Komuter, STAR LRT and PUTRA LRT (BKWPPLK, 1998) – with two further systems opening in 2002, the Express Rail Link (ERL) to the Kuala Lumpur International Airport (KLIA) in Sepang and the monorail system in the central area (Figures 2 & 3). Nevertheless, the role of public transport in the Klang Valley, which had been declining since the 1970s, dropped precipitously in the 1990s, and it remains to be seen if the rail systems can reverse this trend.

TRANSPORT AND HOUSING SECURITY FOR THE POOR: THE CASE OF THE KLANG VALLEY

The findings in the previous section, when considered in conjunction with the framework

TABLE 2. MAJOR TRANSPORT INFRASTRUCTURE PROJECTS IN THE KUALA LUMPUR (KL) METROPOLITAN AREA SINCE 1990

PROJECT NAME	CONSTRUCTION PERIOD	SIGNIFICANT DISPLACEMENT REPORTED?
Road Projects		
North South Expressway (Central Link in Klang Valley)	1994-97	Some
KL-Karak Highway	1994-99	Yes
North Klang Valley Expressway (NKVE)	1994-97	?
Kesas Shah Alam Expressway	1993-98	Yes
North Klang Straits Bypass	1995-98	Yes
Federal Highway II extension	1995-98	?
Cheras-Kajang Highway	1995-99	Yes
Middle Ring Road II	1995-2001	Yes
Sungai Besi Highway	1996-99	Some
Damansara Puchung Expressway (LDP)	1996-99	Some
Inner Ring Road completion (Jalan Tun Razak)	1999-2001	No
Ampang Elevated Expressway	1996-2001	?
Pantai Expressway	1996-	Yes
Kajang-Seremban Expressway	1997-	?
Kajang Bypass/Ring Road	1997-	Yes
SRINT (western KL traffic dispersal) expressways	1998-	Some
Shah Alam-Kluang (Guthrie Corridor) Expressway	2001-	Some
West Coast Expressway (Banting-Taiping)	2001-	?
Rail Projects		
KTM Komuter (suburban rail double-tracking, electrification)	1992-96	Yes
STAR LRT	1994-98	Yes
Putra LRT	1995-98	Yes
KL Sentral (rail hub)	1997-2001	Some (rail workers)
Monorail	1998-2002	Yes
Express Rail Link (KL-Putrajaya-KLIA)	1998-2002	Yes
Other		
Kuala Lumpur International Airport (KLIA)	1994-1998	Yes

Sources: Compiled from various sources, including EPU (1996); BKWPPLK (March 1998); JICA (1998); Syed Husin (1998); URU (1999a; 2000a); Bunnell (2002); and various news items.

presented (Figure 1), suggest a number of issues for investigation with respect to the Klang Valley's housing security and transport linkages. In particular, the investigation asks: is the framework helpful as a starting point and does the evidence in the Klang Valley reflect expectations based upon the wider study – or are there surprises here? In each subsection below, I briefly assess the available evidence.

Displacement as a result of transport policy and practice

Significance of displacement directly due to transport infrastructure. Transport infrastructure projects are expected to be an important cause of recent displacements, especially in light of the high pace of building infrastructure such as expressways and rail projects (Table 2). Complete data are not available, but the evidence below confirms that

Plate 1. Making way for the Pantai Expressway, Petaling Jaya South. Author's photograph.

direct transport displacements have been significant in the Klang Valley. In 1999, transport infrastructure development accounted for 203 (about 27 per cent) of the 745 evicted households counted by URU's monitoring in the Klang Valley. The breakdown reveals 66 evictions for the ERL, 113 for road projects and 24 for a bridge: transport infrastructure development accounted for 1,133 (about 12 per cent) of the 9,710 households reportedly facing planned evictions as of early 2000 (URU, 2000a). In 1998, the Kesas Shah Alam Expressway Highway project was a large case that apparently resulted in the eviction of at least 380 squatter households (URU, 1999a). In 2001, the Pantai Expressway (from the south-western suburb of Subang Jaya to the central area of Bangsar in Kuala Lumpur) was one of the largest single sources of threatened evictions, involving almost 2,000 squatter households (URU, 2000a). This expressway corridor passes through a number of the Klang Valley's most populous squatter settlements in the Pantai Dalam area and Petaling Jaya South (Plate 1). Further examples will be highlighted below.

Although displacement for transport infrastructure has affected significant numbers of people, the Klang Valley's relatively low urban density and multicentred structure mean that transport probably causes fewer evictions than would equivalent investments in most other Asian cities that are much higher in density and usually monocentric in structure (Kenworthy & Laube, 2001).

Who are the victims of transport-related displacement? As previously mentioned, households displaced for transport infrastructure tend to be disproportionately from among the most vulnerable groups in society. This appears to be the case in the Klang Valley, where almost all transport-related displacements documented in recent years have been of so-called squatters with very weak housing tenure. Incidentally, the focus of this paper on squatters as the most threatened group in this urban region would not necessarily be appropriate in countries where residents in many low-income settlements have some kind of customary tenure and cannot be considered squatters.

One reason that the most deprived groups among the region's squatters are disproportionately victims of displacement for transport projects is because many of the displaced settlements have tended to be found in particularly precarious locations on land reserved for infrastructure, including waterways, rail or road alignments and electricity rights of way. This is illustrated by the large numbers of evictions for rail projects discussed below. Weak security of tenure means that the displacements are more likely to be without adequate compensation and to involve violations of housing rights, including forced evictions. More will also be said about this below.

The Land Acquisition Act 1960 (Act No. 486, amended 1997: see <http://www.lawsofmalaysia.com/english/acts.asp?act=Act+486>) provides for strong powers to acquire land for public or private purposes. However, there have been few transport-related displacements in the formal housing sector, in which cases landowners can generally expect to receive adequate compensation or equivalent dwellings elsewhere (as in a recent case reported in *The Star*, 4 March 2002).

Transport modal priorities and displacement. We can speculate that expressway-related displacements might tend to be more significant compared with rail in the Klang Valley due to the somewhat greater expansion of expressways, and since expressways are more space consuming per kilometre than rail systems. However, both expressways and rail projects were large generators of evictions of squatters in the Klang Valley in the 1990s, with both sources probably accounting for several thousand displaced households. Vehicle parking facilities have not featured as a cause of reported displacement or eviction in the Klang Valley, despite the increasing demand for parking.

The most significant rail-related displacements resulted from the double-tracking in the Klang Valley for the KTM Komuter suburban electrified rail system of the national railway company, Keretapi Tanah Melayu (KTM) Berhad, that took place in the early 1990s and numbered in the thousands. The building of the STAR light rail system in the mid-1990s also resulted in significant evictions (at least 350 households) (Syed Husin, 1998). In late 2001, Kuala Lumpur's monorail system caused the demolition of the Kampung Cina squatter settlement in Brickfields (Plate 2). As mentioned above, the ERL was another significant cause of evictions in that year. In 1996, the PUTRA light rail system displaced at least 100 squatter households and included a violent forced demolition in Kampung Taman Aman in Petaling Jaya (Syed Husin, 1998). The surprising scale of rail-related displacements in the Klang Valley during the 1990s seems to be due to the fact that various alignments used for the rail systems were particularly heavily populated with squatter settlements compared with the corridors chosen for expressways. In the case of the KTM Komuter system, squatters had shared the reserve with the old single-tracked national rail system. The main evictions for the STAR light rail system were from a long abandoned rail corridor which had been heavily occupied by squatters. This seems to be a widespread phenomenon across Asia and there have been a number of similar examples, for example, in Mumbai, Jakarta and Manila, of large-scale evictions of squatters living in railway reserves (Patel, 1999; Urban Poor Associates, 2000).

Transport infrastructure planning practice and evictions. One would expect that the lack of openness and transparency in the transport

Plate 2. Kampung Khatijah, Brickfields, Kuala Lumpur, affected, like Kampung Cina by the monorail project.

planning process and the lack of strong policies to minimise displacement would tend to reduce the chances of negotiated outcomes and increase the likelihood of confrontation and forced eviction due to transport infrastructure. Indeed, there is some evidence to support this expectation in the Klang Valley case. There is little opportunity in the process for either informed negotiations or for resettlement problems to come to light early in order that alternatives can be sought. Households threatened with displacement for a transport project often discover its existence very late. In the case of the SPRINT Expressway project through Sungai Penchala, the Malay reserve landowners (in this case not squatters) discovered the imminent acquisition of their properties from newspaper reports (*The Star*, 1998). In another recent case (unusually, of owners of expensive bungalows on leasehold land in Shah Alam), the owners discovered that they were to lose their houses to an expressway project only after construction had begun (*The Star*, 2002).

Malaysian transport planning policy apparently lacks strong policies to minimise displacement from transport projects, except insofar as it might minimise costs. This is not exceptional since, internationally, it is rare for cost-benefit assessments of transport projects to adequately take explicit account of the full range of negative impacts of displacement beyond just the immediate costs (Hook, 1994). Unfortunately, policies on squatters are such that it is unlikely that stronger resettlement-minimising policies will soon be required of Malaysian transport infrastructure agencies. Another way to reduce transport-displacement might be to adopt a transport policy that relies less on major infrastructure projects, but this also appears unlikely in the near future.

The issue of displacement is further complicated by the high level of private sector involvement in transport infrastructure construction in Malaysia, which also contributes to the rapid expansion of such infrastructure. In earlier privatised projects, government agencies usually assumed responsibility for acquiring the land and clearing it of squatters. However, media reports and URU's monitoring indicate increasing involvement of infrastructure concession companies in the land clearance process.

Inconsistent practice on transport displacements. The lack of consistent procedures for displacement further reduces the chances of fair negotiations, increases disputes and often results in forced evictions. In recent transport-related cases in the Klang Valley, compensation sums ranged from zero to more than RM15,200 (US$4,000) (URU, 2000a; 2000b). Commonly, squatters are offered the chance to buy low-cost houses (that need to be paid for with bank loans), sometimes with some payment by the developer towards the deposit. However, many cannot afford the low-cost houses that they are offered (URU, 2000b; Morshidi *et al.*, 1999). This has become more of a problem since the price for low-cost units in central areas was raised from RM25,000 (US$6,580) to almost RM40,000 (US$10,500) (URU, 2000b).

URU's dossiers suggest that squatters are often willing to move when the arrangements seem fair but that many disputes arise when compensation is inadequate, when eviction takes place before alternative accommodation is ready and when the residents reject the alternatives on offer due to inability to pay, poor location, or anger that negotiations were not in good faith. The Pantai Expressway project, for example, has seen a number of disputes over low (and changing) compensation offers, such as one case affecting 200 people in the Jalan Klang Lama area where the developer allegedly reduced the compensation offer from RM11,000 to only RM1,000 (Leong, 2001). At Kampung Sri Murni in the Ampang area, 30 families were forcibly evicted for a road link after negotiations broke down. They claimed there was no formal offer from the developer, while the developer claimed to have offered them a 10 per cent deposit on low-cost houses and an allowance of RM1,000 to move to temporary longhouses, along with an offer of free electricity and water supply (*The Sun*, 1998a). In another case, 40 wooden shops/houses at Kampung Penaga (off Jalan Klang Lama) were demolished to make way for the widening of the main road. Police used water cannon to disperse 300 demonstrators and 16 people were arrested. Those affected complained that the new shop lots on offer were too small and that there had never been any formal negotiations with the Municipal Council (*The Sun*, 1998b).

Indirect transport impacts on housing security for the poor. Indirect impacts of transport, including gentrification, are difficult to observe but we should be alert for any clues. While transport-related standards can contribute to the precarious legal and official status of informal settlements, in the context of Malaysia this appears to be only a small part of a much more pervasive negative official view of informal urban settlements, particularly squatters. An example of a transport-related standard contributing to higher costs for formal sector housing is the setting of rates at which car parking spaces must be provided in housing developments, including low-cost ones (Morshidi *et al.*, 1999:81).

One area to watch for possible transport infrastructure-triggered gentrification is the inner city neighbourhood of Brickfields in Kuala Lumpur, which contains a wide diversity of housing types and socioeconomic groups. The opening in 2001 of the KL Sentral rail hub has dramatically increased the accessibility of the area. Although there has been a burst of high-rise condominium construction in the last five years, residents report that rental rates for existing housing in the area have been stable or declining. It is possible that gentrification has been delayed by the Asian economic problems of the late 1990s.

Transport hardship resulting from housing policy or resettlement

In light of earlier arguments, we expect that the impact of housing policy and resettlement practices on transport and access for the urban poor might be ameliorated (compared with other low-income or middle-income cities) by the relatively high daily mobility of Klang Valley households, including many low-income ones that own motorcycles.

Accessibility of relocation sites and transit accommodation. The Klang Valley provides some examples of squatters being evicted to inaccessible relocation sites, although this particular problem appears not to be as severe as has been reported elsewhere, such as in Manila recently (Urban Poor Associates, 2000). Many examples in the dossiers compiled by URU (1999a; 2000a) mention resettlement at locations distant from the original sites. For example, squatters at Sungai Udang in Segambut, Kuala Lumpur, risked being labelled "unreasonable" by rejecting offers to be resettled 20 km away on the other side of the city (*The Star*, 1999). They were eventually offered a low-cost housing option about 10 km away.

The accessibility of transit accommodation is also an issue. An example of a major transit accommodation site with severe transport problems is Jinjang Utara, Kuala Lumpur, which bus companies find unattractive to service because the area is a cul-de-sac several kilometres from the main road, isolated by water bodies and an expressway from neighbouring areas. In a small survey in 1997, the top reason residents gave for disliking their situation was "lack of efficient public transport/bus" and the top requirement, when asked about facilities at a resettlement site, was a good bus service (Residents of Jinjang Longhouse, 1997). Young women in this community have been campaigning for improved bus services for several years, complaining that they are worse affected than the men, many of whom have motorcycles (Zaitun & Barter, 2001). So accessibility issues are important for less mobile groups, even in the generally "high-mobility" Klang Valley urban region. Ironically, most of the residents of Jinjang Utara had originally been relocated to these longhouses in the early 1990s as a result of the double-tracking and electrification of the Klang Valley KTM Komuter system. Some of their cases are also examples of distant relocation since former communities had been scattered all over Kuala Lumpur, some over 15 km away in southern parts of the city.

In some cases, residents of transit longhouses in the Klang Valley have found themselves again being evicted for transport projects before they are properly resettled. This happened to former squatters from the demolished Kampung Udara in southern Kuala Lumpur who were threatened with forced eviction from their longhouses to make way for the Pantai Expressway project and told to move to distant City Hall longhouses in Cheras and Setapak Jaya, which also would have split the community (*The Malay Mail*, 1999).

Residential mobility, housing policy and transport

The Klang Valley provides examples of housing regulations and practices that reduce the flexibility of low-income households to move house and, hence, inadvertently contribute to their transport burden. In Malaysia, as elsewhere, squatters' positions in negotiations tend to strengthen in proportion to their duration of occupation, although this arrangement is not codified in law (under earlier British Common Law and *adat* or customary law, squatting could eventually confer rights to land). This removes incentives for last-minute influxes into areas designated for demolition but also reduces the residential mobility of low-income households. Another example is a regulation that forbids resettled squatters to resell their low-cost flats within a 10-year period in order to minimise speculative activity and the transfer of low-cost houses to middle-income people (Morshidi *et al.*, 1999).

IMPLICATIONS AND CONCLUSION

This paper has highlighted part of the neglected interface between transport and housing security for the urban poor using the Klang Valley as a case study and found a number of linkages worthy of detailed investigation. In doing so it has suggested that this issue is of relevance to those interested in either urban transport in the South or housing security for the urban poor.

A conceptual framework highlighted two main aspects of this interface: first, transport influences on housing issues and, second, housing issue influences on transport/access for the poor. The discussion focussed on those elements of the framework most relevant to housing security and to two main issues within this focus, namely, the direct displacement of urban poor residents for transport infrastructure and the impacts on accessibility of the location of resettlement sites.

These were then examined in the context of the Klang Valley, Malaysia. The framework helped to enable a coherent discussion of this case study and many of the elements of the conceptual framework were found to be reflected in the Klang Valley, suggesting some utility for the framework. The case study confirmed many observations and expectations suggested by the framework and also helped to refine some of these linkages. For example, the case study brought to light the fact that squatters often occupy precarious sites in corridors that are likely to be required even for space-efficient infrastructure, such as rail. A number of findings ran counter to expectations to an extent, highlighting that local specificities cannot be ignored.

Policy implications

The wider study combined with the Klang Valley case study suggest a number of ways in which policy on transport and housing might take account of these findings. The key message is simply that policies in both transport and housing for the poor can and should take better account of each other. The list below briefly highlights the most prominent of the policy implications of this message raised in the paper. First, a number of reforms are suggested that involve improved integration between transport policy, housing policy and planning. For example, transport-related guidelines and standards for residential areas can be reviewed, especially those that adversely or unreasonably affect the legality of unplanned settlements and the affordability of formal low-cost housing.

Second, reforms are needed in the transport policy realm. Transport infrastructure agencies need "best-practice" policies and practices on involuntary displacement. This would include goals to minimise resettlement (even for communities with weak tenure) that conform to international housing rights standards, with project assessment that takes full account of the range of impacts on people relocated. It could also involve reforms to the transport planning process to make it more open and welcoming of public participation, including negotiation with affected communities.

Finally, policy and practice on low-income housing require more attention to transport and access dimensions in order to reduce accessibility problems for the poor. One approach to this is to emphasise *in situ* upgrading rather than eviction/redevelopment. In the Malaysian context, however, this would represent a fundamental shift in policy towards squatters. Other reforms could focus on the location of relocation sites and transit accommodation – among other things, making sure that they are within a short distance of the original community; keeping established communities together in the relocation process; and avoiding two-step resettlement whenever possible.

Final comments

There are various links between transport and housing security for the urban poor. A number of these were shown to be significant and are likely to be relevant in a wide range of urban

situations, especially where motorisation is rapid and there are large numbers of people living in housing with weak tenure. The sectoral approach adopted here is perhaps somewhat limited but, nevertheless, has provided interesting perspectives and prompted insights of policy relevance in both the housing and transport arenas. Although this paper has not focused on the political economy of these issues, both transport and urban real estate arenas in Malaysia are, to a great extent, shaped by the same political and economic forces, especially the close cooperation between ruling coalition politicians and well-connected businesses (Gomez & Jomo, 1997). Such considerations affect the prospects for the policy reforms discussed and should be addressed in further research. The arguments suggest that anyone with an interest in urban poor housing issues could fruitfully take a more active interest in transport equity debates, and transport policy debates more generally. Similarly, those approaching urban poverty, equity or environmental issues from a transport perspective should not ignore housing and housing security issues. This paper provides a starting point and the beginnings of a framework for further investigation.

ACKNOWLEDGEMENTS

A preliminary version of some of this material was presented with S. Paremeswari and P. Vanitha at the *National Seminar on Sustainable Transport Issues and Challenges in Malaysia*, RECSAM, Pulau Pinang, Malaysia, 7-11 September 2001, organised by the Consumers Association of Penang (CAP) and Sahabat Alam Malaysia (SAM). I would like to thank two anonymous reviewers for their valuable comments on an earlier version. Many other people helped in various ways but I am especially grateful to Brian Williams for facilitating and guiding the larger study, and Maurice Leonhardt, Chris Wilson, Craig Townsend, Paremeswari Subramanian, Vanitha Ponnusamy, Yeoh Seng Guan, William Ross and Adnan Aliani for valuable input and assistance. A grant from the United Nations Centre for Human Settlements (Habitat) made possible the wider study that this Malaysian-focused study builds upon, and this has been facilitated by a grant from the Faculty of Arts and Social Sciences of the National University of Singapore (grant number R-109-000-035-112).

ENDNOTES

[1] "Daily mobility" (to be distinguished from "residential mobility" or the ability to move house) refers to the ability to move around on a day-to-day basis. "Access" refers to the ability to reach a destination, service or good (whether or not this involves much movement). "Accessibility" is a property of a place relative to other places, and refers to how easily it can be reached physically from another place or from within a region.

[2] Interviews by the author were conducted with participants at the Hangzhou preparatory meeting for Habitat+5 in October 2000 and at the UN-ESCAP/CITYNET Seminar on Transport and Communications in Kuala Lumpur, November 2000. Further interviews were conducted by Chris Wilson with participants at a housing rights workshop organised by the Asian Coalition for Housing Rights (ACHR) held at the Urban Resource Centre in Karachi in November 2000. Further views were obtained by the author through email exchanges with academic, professional and activist informants.

REFERENCES

Aldrich, B.C. & Sandhu, R.S. (eds.) (1995) *Housing the Urban Poor: Policy and Practice in Developing Countries*, London: Zed Books.

Anzorena, J., Bolnick, J., Boonyabancha, S., Cabannes, Y., Hardoy, A., Hasan, A., Levy, C., Mitlin, D., Murphy, D., Patel, S., Saborido, M., Satterthwaite D. & Stein, A. (2000) 'Reducing urban poverty: Some lessons from experience', *Environment and Urbanization*, 10(1), 167-86.

Asia Times (1999) 'Evictions drown out clamor for cheap housing', 13 July, <http://www.atimes.com/se-asia/AG13Ae01.html>, accessed in September 2001.

Asian Development Bank (1995) *Involuntary Resettlement*, ADB Policy Paper R1-79-95 (August 1995), Manila: Asian Development Bank, <http://www.adb.org/ Documents/ Policies/Involuntary_ Resettlement/ default.asp?p=policies>.

Barter, P.A. (2000) 'Transport dilemmas in dense urban areas: Examples from Eastern Asia', in M. Jenks & R. Burgess (eds.), *Compact Cities: Sustainable Urban Forms for Developing Countries*, London: Spon Press, 271-84.

Barter, P.A. (2001) 'Towards eastern Asia's first automobile dependent city? Transport and space in the Klang Valley urban region', paper presented at the *Third International Malaysian Studies Conference*, 6-8 August 2001, Universiti Kebangsaan Malaysia, Bangi, Malaysia.

Barter, P., Kenworthy, J. & Laube, F. (forthcoming) 'Lessons from Asia on sustainable urban transport', in N. Low & B. Gleeson (eds.), *Earth on the Move: Is Urban Transport Sustainable?*, Basingstoke: Palgrave.

Bahagian Kemajuan Wilayah Persekutuan dan Perancang Lembah Klang (BKWPPLK) (1998) *Wilayah Lembah Kelang: Maklumat Asas (Jilid III)* [Klang Valley Area: Basic Information (Volume III)], Division for Federal Territory Development and Klang Valley Planning, March 1998.

Boonyabancha, S. (1983) 'The causes and effects of slum eviction in Bangkok', in S. Angel, R.W. Archer, S. Tanphiphat & E.A. Wegelin (eds.), *Land For Housing the Poor*, Bangkok: Select Books, 254-80.

Bruun, E.C. & Schiller, P. L. (1995) 'The time-area concept: Development, application and meaning', *Transportation Research Record*, 1499, 95-104.

Bunnell, T. (2002) 'Multimedia utopia? A geographical critique of high-tech development in Malaysia', *Antipode: A Radical Journal of Geography*, 34(2), 265-95.

Bunnell, T., Barter, P.A. & Morshidi Sirat (2002) 'Kuala Lumpur Metropolitan Area: A globalizing city-region', *Cities*, 19(5), 357-370.

Dimitriou, H.T. (1992) *Urban Transport Planning: A Developmental Approach*, London and New York: Routledge.

Economic Planning Unit (EPU) (1996) *Seventh Malaysia Plan 1996-2000*, Kuala Lumpur: EUP, Prime Minister's Department, Government of Malaysia.

Economic Planning Unit (EPU) (2001) *Eighth Malaysia Plan 2001-2005*, Kuala Lumpur: EPU, Prime Minister's Department, Government of Malaysia, <http://www.epu.jpm.my/RM8/front_RM8.html>, accessed in October 2001.

Gannon, C.A. & Liu, Z. (1997) *Poverty and Transport*, Discussion Paper, TWU-30, Washington, D.C.: Transportation, Water and Urban Development Department (TWU), World Bank.

Gilbert, A. & Gugler, J. (1982) *Cities, Poverty, and Development: Urbanization in the Third World*, New York: Oxford University Press.

Gomez, E.T. & Jomo, K.S. (1997) *Malaysia's Political Economy: Politics, Patronage and Profits*, Cambridge: Cambridge University Press.

Hook, W. (1994) *Counting on Cars, Counting Out People: A Critique of the World Bank's Economic Assessment Procedures for the Transport Sector and their Environmental Implications*, ITDP Policy Paper I-0194, New York: Institute for Transportation and Development Policy.

Hook, W. (1998) *Transport and Development Policy for the United Nations Development Program (UNDP)*, unpubl. draft document, New York: Institute for Transportation and Development Policy.

Hook, W. & Replogle, M. (1996) 'Motorization and non-motorized transport in Asia: Transport system evolution in China,

Japan and Indonesia', *Land Use Policy*, 13(1), 69-84.

Jia, W. & Wachs, M. (1998) 'Parking and affordable housing', *Access*, 13, 22-25.

Japan International Cooperation Agency (JICA) (1998) *Study of Integrated Urban Transportation Strategies for Environmental Improvement in Kuala Lumpur (SMURT-KL)*, unpubl. planning report for Kuala Lumpur City Hall.

Keivani, R. & Werna, E. (2001) 'Modes of housing provision in developing countries', *Progress in Planning*, 55(2), 65-118.

Kenworthy, J. & Laube, F. (2001) *UITP Millennium Cities Database for Sustainable Transport* [CD-Database], Brussels: International Union (Association) of Public Transport (UITP).

Kenworthy, J. R. & Laube, F.B. with P.W.G. Newman, P.A. Barter, T. Raad, C. Poboon & B. Guia (Jr) (1999) *An International Sourcebook of Automobile Dependence in Cities, 1960-1990*, Boulder: Colorado University Press.

Lee, B.T. (1987) 'New towns in Malaysia: Development and planning policies', in D.R. Phillips & A. Yeh (eds.), *New Towns in East and Southeast Asia: Planning and Development*, New York: Oxford University Press, 153-69.

Leong, K.Y. (2001) 'Squatters affected by highway project seek help from Works Ministry', *Malaysiakini*, online news site, <http://www.malaysiakini.com/News/2001/10/ 2001102207.php3>, accessed on 23 October 2001.

Mabogunje, A.L., Hardoy, J.E. & Misra, R.P. (1978) *Shelter Provision in Developing Countries : The Influence of Standards and Criteria*, Chichester: John Wiley.

Malay Mail, The (Kuala Lumpur) (1999) 'Squatters hold demo at City Hall', 13 May.

Manning, I. (1984) *Beyond Walking Distance: The Gains From Speed in Australian Urban Travel*, Canberra: Urban Research Unit, Australian National University.

Mitlin, D. (2001) 'Housing and urban poverty: A consideration of the criteria of affordability, diversity and inclusion', *Housing Studies*, 16(4), 509-22.

Morshidi Sirat, Abdul Fatah Che Hamat, Abdul Rashid Abdul Aziz, Alip Rahim, Halim Salleh & Usman Hj. Yaakob (1999) *Low-Cost Housing in Urban-Industrial Centres of Malaysia : Issues and Challenges*, Pulau Pinang: Penerbit Universiti Sains Malaysia.

Patel, S. (1999) 'Revisiting participation: "Win-win" strategy in negotiations with railway authorities and squatters, Mumbai, India', *Transport and Communications Bulletin for Asia and the Pacific*, 69, 79-87.

Rasagam, G. (2001) 'A sustainable transport strategy for Penang', paper presented at the CAP National Seminar, *Changing Directions: Towards Sustainable Transport in Malaysia*, RECSAM, 7-10 September 2001, Penang, Malaysia.

Residents of Jinjang Longhouse with Urban Resource Unit (URU) (1997) *Permanent Housing Needs: A Case Study of Jinjang Longhouse*, Kuala Lumpur: Urban Resource Unit.

Ryan, S. (1999) 'Property values and transportation facilities: Finding the transportation-land use connection', *Journal of Planning Literature*, 13(4), 412-27.

Star, The (Petaling Jaya) (1998) 'Residents want highway project to be shelved' , 17 March.

Star, The (Petaling Jaya) (1999) 'Squatters hamper flood mitigation project', 30 September.

Star, The (Petaling Jaya) (2002) 'Plans for expressway to cut through Desa Subang Permai', 4 March, *Metro Section*.

Stretton, H. (1975) *Ideas for Australian cities*, 2nd edition, Melbourne: Georgian House.

Sun, The (Kuala Lumpur) (1998a) 'Squatters take eviction appeal to ministry', 29 December.

Sun, The (Kuala Lumpur) (1998b) 'Squatters fail in last-ditch bid to stop demolition', 13 May.

Syed Husin Ali (1998) 'Squatters and forced evictions in Malaysia', in Fernandes, K. (ed.), *Forced Evictions and Housing Rights Abuses in Asia: Second Report 1996-97, Eviction Watch Asia*, Karachi: CP Press, 91-102.

United Nations Centre for Human Settlements (UN-HABITAT) (1996) The Habitat Agenda, Nairobi: UN-HABITAT, <http://www.unchs.org/unchs/english/hagenda/index.htm>.

Urban Poor Associates (2000) *Resettling Communities*, Manila: Urban Poor Associates,<http://www. codewan.com. ph/balay/updates/resettling_0727.doc>, accessed in February 2001.

Urban Resource Centre (URC) (2002) 'Update News Eviction Alert Appeal: Lyari Expressway – An Appeal from the Poor Communities of Lyaari River', <http://urckarachi.org/update%20 eviction% 20news.htm#July%2009>.

Urban Resource Unit (URU) (1999a) *Dossier on Forced Eviction in Malaysia (January-December 1998)*, Kuala Lumpur: Urban Resource Unit.

Urban Resource Unit (URU) (1999b) *Dossier on Government Policies on Housing, Urban Settlers (Squatters) and Forced Eviction in Malaysia (January-December 1998)*, Kuala Lumpur: Urban Resource Unit.

Urban Resource Unit (URU) (2000a) *Dossier on Forced Eviction in Malaysia (January-December 1999)*, Kuala Lumpur: Urban Resource Unit.

Urban Resource Unit (URU) (2000b) *Dossier on Government Policies on Housing, Urban Settlers (Squatters) and Forced Eviction in Malaysia (January-December 1999)*, Kuala Lumpur: Urban Resource Unit.

World Bank (1994) *Resettlement and Development: The Bankwide Review of Projects Involving Involuntary Resettlement 1986-1993*, Washington, D.C.: Environment Department, World Bank.

World Bank (1996) *Sustainable Transport: Priorities for Policy Reform*, Washington, D.C.: World Bank.

Zaitun Mohamed Kasim & Barter, P. (2001) 'Zero visibility: A call for more attention to the neglected area of gender in transport planning in Malaysia', paper presented at the *National Seminar on Sustainable Transport Issues and Challenges in Malaysia*, RECSAM, Pulau Pinang, Malaysia, 7-11 September 2001, organised by the Consumers Association of Penang (CAP) and Sahabat Alam Malaysia (SAM).