



A spatial study of parking policy and usage in Melbourne, Australia



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ABSTRACT

Few cities have a metropolitan wide parking policy. More often than not the planning of parking is undertaken by decentralised urban local governments with broad central guideline on parking supply rates. The provision of parking is thus generally opportunistic, aimed at facilitating and encouraging the decentralisation of travel and urban development. This paper documents the spatial distribution of policy and usage of parking in Melbourne, Australia, in order to obtain an indication of the spatial variations in parking policy and usage. It briefly reviews parking policy literature. It then reviews the spatial pattern of existing parking policy in Melbourne showing the increase in quality (more space and lower price) with distance from the central city. Parking usage is then studied, again showing a tendency towards greater parking usage per activity level as one moves away from the city centre and the relationship to activity levels (jobs) in suburban areas. The paper reinforces the view that the focus on central city parking policy and the lack of a co-ordinated parking policy for outer suburbs encourages travel and urban development in outer suburbs. The paper calls for further research in other cities to confirm these trends.

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1. Introduction

Parking policy relates to the management of the price, supply, duration and location of parking to enhance the urban environment. Parking pricing and supply policy often focuses on the central part of the city and areas of high levels of employment and retail activity. However the supply, location, duration and price of parking influence all locations in a city. The spatial distribution of the price, supply, demand and usage of parking, needs to be understood. If it is not understood the relationship between parking and urban form is also not clear. This paper starts the investigation of the spatial distribution of parking usage and its relationship to parking policy.

The paper looks at the spatial distribution of the supply and usage of parking in three parts. The first briefly outlines existing approaches to parking policy. Section 2 examines and analyses the existing parking policy across metropolitan Melbourne. It will cover the Metropolitan Planning Scheme and variations to this scheme. Parking pricing policy is also introduced. Section 3 looks at the distribution of parking usage across Melbourne. This overview points to variations in parking demand across the urban area and

the potential influence of parking policy. The paper closes with a call for similar research to be carried out in other urban areas to confirm the relationship between parking, land-use and transport.

2. Literature review

Parking policy tends to fall into two camps. The first looks at the supply of parking and the second its price. These aspects will be discussed. Parking policy focuses almost entirely on passenger vehicles. Parking for people with disabilities gets some mention due to legislation on discrimination, but multi-use and high occupancy parking along with motorbikes, bicycles and freight vehicles parking are rarely considered in policy statements. This paper therefore focuses primarily of parking for passenger vehicles.

Urban planners and parking policy formulators generally focus on setting of a rate (parking spaces per activity level) at which parking should be provided (Shoup, 1999). A surrogate measure of activity (e.g. floor area, number of beds, student numbers etc.) which is relatively easily measured is used to form a base for calculating the number of required parking spaces. There is therefore a relationship between the scale of land use development and the parking provided through these parking rates. Willson (1996) surveyed a number of planners in the United States and found that most surveyed a nearby city and consulted the ITE

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(2004) handbooks in order to gain an indication of parking requirements.

Such approaches, although they do not relate parking need to parking demand directly, are still used. This is primarily due to their ease of explanation and understanding by the parties associated with parking provision decisions. Fortunately, the database upon which parking decisions can be made are broader and the inclusions of multi-use parking has been investigated. Recent parking policy research (Litman, 1996; Cuddy, 2007; VTPI, 2008) suggests the proposition that the relationship between parking rates and the land-use they service is not always constant. Such factors as geographic location, demographics, economic factors, land use planning, transport planning, and parking access design may influence them. The parking rate can be specified as a minimum (Wendt and Levison, 1990), required (Victorian Planning Scheme, 2009) or maximum (Millard-Ball, 2002) rate depending on the jurisdiction. Whatever the parking rate specified there is still a negotiation process between developers, planning institutions and local residents which influences the final decision.

Policy on the choice of parking duration and location are generally subsets of the general supply policy. Parking duration and location policies tend to be local-level policies focusing on particular regions as distinct from metropolitan policies. The exception to this is the integration of parking and public transport policies through the provision of park and ride facilities.

Another approach to control parking is through its price (Willson and Shoup, 1990). This has received more consideration in the literature than supply policy, however, its application generally relates only a small section of the city, primarily the central part of the city (Shoup, 2005; VCEC, 2006; Litman, 2006; Verhoef et al., 1995). Parking pricing policy has been introduced through a parking levy (Parking Space Levy Act (NSW), 1992; Perth Parking Management Act (WA), 1999; Hamer et al., 2009), workplace parking levy (Transport Act (UK) 2001; Parking Forum, 2005; Enoch and Ison, 2006), commercial parking tax (Litman, 2006), fringe benefit for income tax purposes (Fringe Benefits Tax Assessment Act (Australia), 1986; Income Tax Act (NZ), 2004), 'cashing out' of parking policy (Morris, 2005; Shoup, 1997, 2005).

There has been considerable research into the relationship between parking policy and travel. Parking policy in city centres can have a strong influence on travel behaviour. Data shows that providing an abundant supply of relatively cheap parking makes it difficult to persuade drivers to leave their cars and use public transport (Pourbaix, 2005). Indeed, some studies suggest that levels of parking price can be more significant than levels of public transport provision in determining means of travel (particularly for the journey to work) even for trips that are very well served by public transport (Department of Communities and Local Government 2001). While governments at all levels can continue to expand infrastructure to meet actual and perceived access needs, Brown and McKellar (1999, p. 371) suggest that parking controls (both supply and cost) are 'the single most effective local tool to manage and limit traffic'.

Rarely do researchers look at the spatial distribution of parking policy across and urban area nor the usage of parking. This study

does just that, it takes a first look at the distribution of parking across the city of Greater Melbourne, Australia. It explores potential links between the implementation of parking policy and the consequent result of this: parking usage.

3. Parking policy in Melbourne

The previous section has shown that parking policy, through the provision of parking rates, tends to focus on the supply of parking across urban regions and pricing of parking in the central part of the city. This section looks at Melbourne in order to confirm this view. As stated above parking policy can relate to four dimensions: supply, location, duration and price. This section will look at the spatial distribution of these policies in Melbourne.

3.1. Parking supply

Parking supply policy is possibly the most firmly planned spatial policy in Melbourne. The Victorian Planning Scheme (2009) was developed in order to provide a consistent planning basis across all of Victoria. Within the Planning Scheme, Clause 52.06 governs the parking standards in terms of rates, dimensions and related considerations. Specifically, Clause 52.06's purpose is to ensure that car parking facilities are provided in accordance with the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local policies such as a Local Parking Precinct Plan (Melbourne 2030, 2009). Clause 52.06 aims to ensure that the design and location of car parking areas does not adversely affect the amenity of the locality; achieves a high standard of urban design; enables easy and efficient use; and protects the role and function of nearby roads.

Generally speaking, new developments must provide parking based on Clause 52.06. Table 1 below provides some of the standardised land uses that have a predetermined parking standard as set out in the Victorian Planning Scheme (2009). The parking rates specified in the Scheme is that required for development. Rarely do developers in the inner suburb provide more parking than that required by the Scheme due to the cost of providing a parking space. In outer suburbs where the cost of land is lower some developers may exceed that required by the Scheme.

When a dispensation from the Scheme is sought, Clause 52.06 provides a number of decision guidelines, which provide guidance in ascertaining a reduced parking provision. In order for the development to gain a reduction or complete waiver in the car parking requirement, one, or a number of the decision guidelines must be explained and adhered to. Developers who require traffic impact reports to be submitted to local governments in order to gain a permit, often sub-contract out the task to traffic engineering company. Traffic engineers assess and analyse the parking, along with other traffic and transport related aspects within the area and specific to the development site, to try and achieve a parking dispensation or complete waiver for their respective client. The application involves submitting a report to council as well as advertising the proposed development to the local community,

Table 1
Victorian car parking requirements, Clause 52.06, Victorian Planning Scheme (2009).

Land use	Car space measure	Parking rate
Shop, other than specified in this table	Car spaces to each 100m ² of leasable floor area	8
Office other than specified in this table	Car spaces to each 100m ² of net floor area	3.5
Restaurant	Car spaces to each seat available to the public	0.6
Hotel or tavern	Car spaces to each 100m ² of bar floor area available to the public	60
	Car spaces to each 100m ² of lounge floor area available to the public	30
Post office	Car spaces to each 100m ² of net floor area	3.5

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