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Urban parking policy in Europe: A conceptualization of past and possible future trends

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A R T I C L E   I N F O

A B S T R A C T

In the last two decades parking has increasingly gained importance in urban planning. Despite the growing number of papers published in recent years, an overall conceptualization of parking policy is still missing. Previous attempts (Shoup, 2005; Litman, 2006; Barter, 2010) focus mainly on the North American planning experience. We try to bridge this gap analysing the evolution of parking policy in Europe. In this paper we first present the key aspects of parking policy, and describe their generic evolution. Next we suggest a novel approach for parking policy making. We conclude by discussing some of the major challenges policy makers will face in the near future regarding parking in urban areas.

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1. Introduction

In the last two decades parking has increasingly gained importance in urban planning mainly because car ownership and use keep growing while urban space becomes scarcer. The literature on parking has been for a long time dominated by gray literature, such as reports and (non scientific) articles published by professionals working in parking. Scientific publications were relatively scarce until the end of the 1990s. In the words of Ison and Rye (2006, p.445) "whilst there are academic papers in the area . . . (parking) is, on the whole, an under-researched area of transport" especially when compared to an area such as road user charging. Although in the last few years several papers on parking have been published an overall theory on parking policy is still lacking (Barter, 2010).

The existing literature on parking – both the scientific and the gray one – is very dispersed with most of the articles, papers and reports focussing on specific aspects of parking and/or on specific empirical findings. Additionally, only a few authors have tried to explore the theoretical aspects of parking as a whole. Arnott (2006) researches optimal parking policies in urban areas, whilst others (Verhoef et al., 1995; Calthrop et al., 2000; Button, 2006) focus on the economic analysis of parking policies as a substitute to road pricing. Next, some authors address the theoretical aspect of parking problems in specific areas such as the Central Business District (Ligocki and Zonn, 1984; Voith, 1997, 1998) or residential areas (Merriman, 1995). Finally Marsden (2006) reviews the (scarce) evidence base upon which parking policies are based concluding that more research is needed in order to fully understand the impact of parking on urban accessibility and attractiveness.

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There are very few examples of comprehensive works on parking, the most important being Jakle and Sculle (2004), Litman (2006), and Shoup (2005). Later, Barter (2010) proposed a three-way categorization for parking policy, going further than Litman and Shoup. All of them are mainly based on the North American planning experience. More recently Kodransky and Hermann (2011) have reviewed successful parking policies in European cities. In this paper we describe the development of parking policy in urban areas on the basis of the European parking planning experience of the last decades. More specifically the aim of this paper is twofold:

(1) To conceptualize parking policy in Europe, that is, to propose key aspects of parking policy and a generic description of how it evolves;
(2) To contribute to the discussion on the future of parking policy in European cities, by proposing a new approach for it.

To the authors' knowledge this is one of the few attempts to form a comprehensive conceptualization of urban parking policy. We build on the previous work on Shoup (2005), Litman (2006), Barter (2010) and EU (2005), but go further by introducing a framework to describe the evolution of parking policy. This conceptualization should help policy makers to position their cities in the right phase of the development of parking policy and to understand the challenges they will face in the next phase. It also helps researcher to identify the questions that practitioners would like to answer. We focus on the European planning experience, with most examples coming from the UK and the Netherlands because these two countries are generally recognized as some of the most experienced in Europe in terms of parking policy and management.

The methodology used for this paper is inspired by grounded theory, a well-known research methodology in the social science. This method is used to generate theories from both inductive and deductive thinking (Glaser, 1992). We do not claim to fully have applied grounded theory in all its steps, but adopted it as a way of developing a new theory. More specifically we first generated concepts regarding parking policy based on the scientific and the gray literature and on the authors' own working experience. Next we discussed our ideas with several experts and academics in the field, mainly but not exclusively from the UK and Netherlands, and modified it if needed. After around ten such discussions, our theory building reached a relative saturation point; further discussions did not contribute further to theoretical development. Despite the fact that most information presented in the paper is based on the UK and Dutch planning experience, we believe that the conclusions and policy implications are likely to hold for other European cities as well. This is supported by previous research which suggests that European cities follow a similar pattern in parking policy (EU, 2005; Dijk, 2010) and confirmed by the discussions with experts.

The remainder of this paper is organized as follows. In section two we present the conceptual elements of parking policy, while in section three we propose a framework that explains how urban parking policy evolves. Section four suggests a different approach for parking policy. We conclude by discussing some of major challenges that will characterize the future of urban parking and making suggestions for further research.

2. A conceptualization of parking policies

In most European countries parking policy is a local policy. Each city and town is usually free to set the objectives of the policy and to select the policy instruments to implement it. National governments usually provide guidelines, mostly on parking requirements (see Section 2.1.1), but rarely interfere in policy making.[1] The main reason for this is the recognition that parking is a local matter and that local authorities will deal with it better than will regional or national government.

In this section we conceptualize parking policies distinguishing three aspects: (a) the *key elements* of parking supply; (b) the policy *instruments* that can be used to change those elements; (c) the *aims* of policy making, or the effects that parking policies should have.

2.1. Key elements and policy instruments

The key elements of parking supply include:

- The number of parking places by type (i.e. on- and off-street parking).
- The location of parking places by type (e.g. out-of-town Park and Ride facilities, downtown garages, etc.).

Parking supply is of course mediated depending on who owns and controls it. On-street parking is almost totally owned and mostly controlled by local authorities; off-street parking might be owned by either local authorities or private parties and it is usually controlled either by the local authority or by a private parking operator.

Key policy instruments basically consist of:

- Parking requirements, i.e. the "number of parking spaces that must be supplied at a particular location, which is often mandated in zoning codes or development requirements based on publish standards" (Litman, 2006; p. 272).

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[1] An exception to this is for example Poland, where the national government has the authority to decide the maximum price for on-street parking tariffs.