

You Pay For What You Get

How parking fees relate to the quality of a city center



It is well known that parking is not a goal in itself. People want to park somewhere because there are social or economic activities in the area that they are attracted to, or have a necessity to visit. Therefore the economics of parking are strongly influenced by the environment in which the parking takes place. The quality of the inner-city or the shopping center determines the parking fees that can be charged, and this article will demonstrate some examples and experience gathered from the Netherlands and the UK.

Classifying central (Shopping) areas

In order to link parking fees to the quality of a central area you need to find ways to classify them. There are several indicators that can be used for classifying shopping areas. One can look at the catchment area of the centre, the size (number of inhabitants) of the area from where visitors are attracted to the centre. Another indicator is the number of visitors (or the percentage of the visitor population) that does not live in the town itself, but is attracted from the surrounding area. This is called the regional potential of the centre.

Also the size itself of the centre (gross floor area) can be used as an indicator for the quality of the center. Last but not least, the economic potential of the area which can be measured by the total turn-over that the retailers achieve together should be noted.

The classification of urban locations is one of the main questions in urban science. In the 1930's, German geographer Walter Christaller proposed the Central Places Theory as a way of understanding how urban centres relate to one another. Christaller describes the system of urban settlements as a series of nodal points (Central Places), with a geometrically shaped area around it that is served by the Central Place with goods and services. Some of the Central Places

rank higher, and serve for specialized goods and services for an extended area, comprising several of the minor Central places.

The main shopping centres in general were located in the centre of town. Due to strict planning laws this hierarchy stayed intact for a long time.

In recent years, new developments have undermined this traditional hierarchy. Some municipalities allowed the building of large shopping-malls on the edge of town, which attract some visitors from very long distances.

Current day shops, such as large DIY and furniture and factory outlets no longer fit into traditional shopping areas and have moved to peripheral areas. Two other factors that cause a change in the traditional way the retailing industry was ranked are the increasing mobility of customers and the use of the internet as a shopping channel.

Nevertheless we find in the Netherlands the hierarchy in shopping centers still mainly intact.

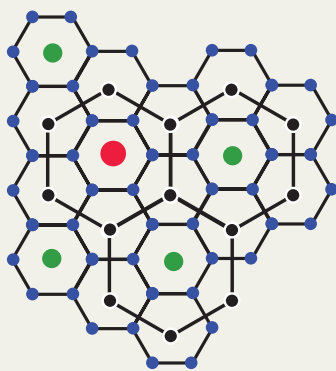
Mobility profiles

Regarding parking, the main difference between the various levels of shopping centres lies in the mobility-profiles of the shopping centres. The mobility profile of a shopping centre inner city can be defined as 'the set of characteristics that describe the several elements of traffic that has a destination in the specific area'.

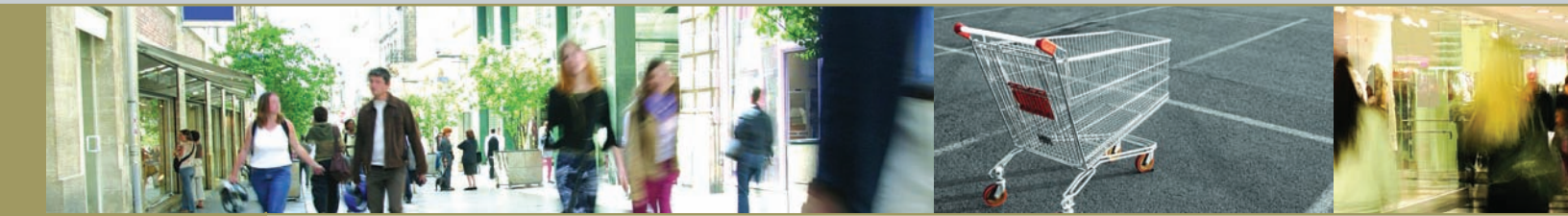
The mobility profile was a key element in the strict location policy the Dutch government followed in the last decade of the 20th century. The mobility profile of a company determined at what type of location the company was allowed to settle. The original governmental policy document only used one mobility profile for retailing. In a study for the national organization for retailers (done by one of the authors of this article) evidence was found that each type of shopping area had its own distinctive mobility profile.

Compared to traffic caused by employees or goods transport, retail customer traffic is far more in volume and intensity. Within retailing, supermarkets and drugstores have a larger than average visitors intensity (the number of customers per m2 per week), whereas furniture shops and DIY shops have a lower than average visitors intensity. But even within the supermarkets there is a difference in intensity, depending on the type of supermarket.

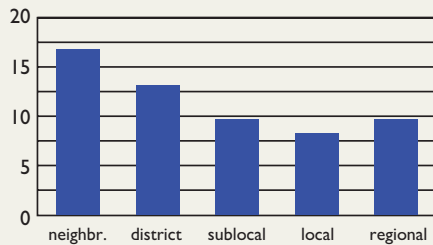
Central Place Theory Théorie des lieux centraux



- KEY/CLEF
- Boundary / Limites
 - Village
 - Town / Ville
 - City / Village
 - Conurbation / Ensemble urbain

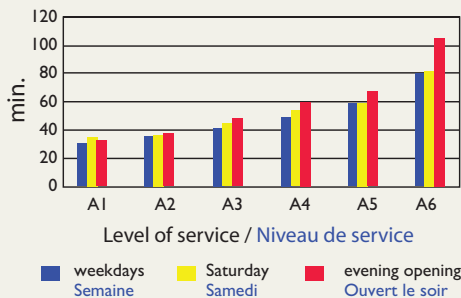


Number of **VISITORS** per m2 per week
 Nombre de visiteurs par m2 par semaine
Supermarkets / Supermarchés



Average **DURATION OF STAY**

City shopping area, by day
 Durée moyenne du séjour
 Zone commerciale, par jour



As higher ranking shopping areas are usually bigger in size, they also tend to have more customers. Not only have higher ranking shopping areas more visitors, but these visitors also stay longer, which has its effects on parking demand.

And, as higher ranking shopping areas attract their visitors from greater distances, the share of customers that come by car too varies. The regional potential of the shopping area plays an important role here. Locally the bicycle plays an important role in shopping trips, but shopping trips to another town are usually made by car.

The mobility profile contains not only a quantitative description of customers traffic, but also of traffic caused by employees (number of employees, modal split, travel distance, etc), and of goods transport (number of deliveries, time of delivery, length of stay, etc).

Parking fees and mobility profile

The position of a town shopping area in the hierarchy of retailing causes certain expectations of visitors concerning the traffic situation that they can expect when visiting the area. This is caused by the image people have of the town, its retailing profile and the connected (general) mobility profile. It also brings with it a certain expectation of what level of parking fees will be charged in the town. Practically all towns of 75,000 inhabitants or more have paid parking in their town center. The bigger the town, the higher the parking fees.

This means that the position of a town center (its ranking in the retail hierarchy) influences customer's expectations on:

- Supply (number and diversity of shops)
- Quality of the center
- Parking fees (paid or non paid/ level of parking fees)

Measuring price sensitivity

Parking is a non-elastic commodity. Several surveys all over the world show that the price-elasticity of parking demand is very low. Usually values are estimated at -0.3; this means that a 10% increase of parking fees would lead to a decrease of parking demand of 3%. There are indications that the value of the price-elasticity of parking demand increases with long(er)-stay parking, and also with higher levels of parking charges. Although most studies conducted in this field

concern commuter parking, it is felt that the results give a good indication too for other travel motives, such as shopping trips.

We have found that customers expectations on parking fees can be measured using adapted methods from market-research. In marketing, several methods are used to find an optimal price, taking into consideration competition. A well known method was developed by Gabor and Granger that looks at a relation between price-sensitivity and sales. This method was further developed by Peter van Westendorp in his Price Sensitivity Measurement (1970's). He looks at the price that people find too cheap for an article, the price they consider as cheap, the price they consider as expensive but reasonable, and at what price they think it is too expensive. The acceptable price ranges then between the 'point of marginal cheapness' and the 'point of marginal expensiveness'.

The fallacy is born

Everybody who is anybody in the retail industry knows that if parking were made free in a town centre, then the immediate effect would be a major and permanent increase in business. However, this fallacy is not generally accepted by those involved in parking management and so the following objective arguments counter this fallacy and support the hypothesis:

The Hypothesis

"Shoppers are prepared to pay for parking provided the price reflects the perceived quality of the destination whether it be a city or town centre or other destination."

Supportive Arguments

The arguments supporting the proposition are primarily qualitative and include:

- Customers complained about the prices, but the highest priced car park was always full, even though a short distance away was a cheaper option. It was the convenient location near a popular store that made the higher price less important.
- The top floors of a car park with reduced hourly rates are always less used than the lower, higher priced levels, so substantially cheaper parking is less important than convenience.
- A nearby town with a very good shopping centre has parking priced at a much higher rate than many of the surrounding towns yet the car parks are always full. If price in itself were the major driver, the highly priced town would have fewer shoppers and not always have full car parks – it's the variety and quality that is important not the price of parking.

A quantitative approach

If the hypothesis were true there would be a relationship between the cost of shoppers parking and the quality of shopping in a town or city centre.

Shoppers generally park for a period of between 1.5 and 2 hours and so this would be the basis for one variable. From this, the Parking Price Indicator (PPI)¹, which is "the weighted





average of the cost of two hours parking” obviously excluding free car parks and long stay car parks was derived.

Difficult to measure was the success of a shopping centre; the first thought was for each town or city to use the highest rental of one square metre of the first 6 metres of a retail unit. The logic being that the higher the rental value the greater sales were being made and therefore the more prosperous and successful was the centre.

Figures from the Valuation Agency tasked with producing values to enable property taxes to be calculated were obtained but this did present a problem as figures were only produced every 5 years when valuations were done and it was expensive to buy the data. The exercise had shown that the hypothesis was correct but getting the figures was the problem. Unable to think of another proxy let alone a source, the project was mothballed until that was possible.

20 years later

The measure of the quality and prosperity of a town or city was provided by the rankings that were calculated by Experian of the principal shopping centres in the UK. The PPI was calculated for all the towns, cities and villages on the author's database of car parks.

The principal motivator for visitors visiting and parking in any town or city centre are those attributes which the visitor is seeking to visit. In a town or city centre it is usually because they are seeking to purchase something specific or wish to browse through a range of shops to help them decide or just to window shop. A further reason for visiting any place is because it is a place of historical or other interest which would attract tourists.

We found that it is the quality of what is on offer at the destination - whether it be shopping, leisure, history or the beaches that influences the price.

General conclusions

Free parking does not exist. Building and operating parking facilities, be it on-street or off-street, always cost money. At least four parties have an interest in an optimal parking situation:

- Authorities (e.g. municipality)
- Property owners
- Property users (retailers)
- Customers

Traditionally, parking policies in the first place point at the customers as the party that should pay for the parking costs. But as there are four parties involved it would be reasonable to consider what profit each of the parties has from parking, and try to find an agreement on who pays which share.

Acceptable parking fees for customers depend on the added value of visiting the area. These acceptable parking fees are therefore related to the 'service level' of the area. Indicators for this service level are:

- character of shopping behaviour,
- Place in shopping hierarchy,
- Rents

Parking in itself does not contribute to the attraction of a town center. For customers, parking is a hindrance that you have to take into account when visiting the center. Therefore people do not want to pay a high price for parking. As a result often a tension exists between the parking fees that are acceptable to the customers and the income a parking-operator needs from the parking fees for a commercially viable operation of the parking facilities. ■

¹ For a complete definition of the term PPI (Parking Price Indicator) contact the author Ian Betts, at ian@parking-info.com

Editor's note: This article is an excerpt from the presentation given by the authors at the Canadian Parking Foundation's 2009 World Parking Symposium in Breda. For the sake of space, many of the supporting statistics and discussions have been edited. To get the full details visit ian@parking-info.com or Tel: +44 (0)1252 674967