

# **Is there a market for my business ?**

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# CHAPTER 1

## Introduction

Different types of venue target different markets, with a smaller or broader geographic scope. In a city you do not drive your car half an hour for a visit to the supermarket, but you just go around the corner. For shopping at megastores or malls you are willing to go further away, and for recreational purposes, i.e. theater, cinema, wellness or nature parks you, will drive (much) further. It is also the other way around: A supermarket, or any other (commercial) enterprise needs to attract a certain volume of shoppers to earn a profit or be sustainable. So it needs to be located in a place with a large enough customer base, with not too much competition.

*The purpose of this report will be to deduct the minimal client base for different types of venue in the Netherlands both for urban and rural environments.*

The key-indicator will be determined as well. Based on intuition one could predict that a supermarket needs only to have a certain amount of people in the vicinity. For the opera, which attracts mainly people with higher education it would be more appropriate to look at income weighted population numbers (in a wider area). for blockbuster cinema it may be the other way around.

For this foursquare.com will provide venue location data. the PDOK (Publieke Dienstverlening Op de Kaart, Public services on the map), discloses geographical government data. To prevent stressing the foursquare developer account, which has a daily maximum of 950 calls it is not feasible to use information of the whole of the Netherlands for this research. Since the Netherlands is a fairly small country the assumption is made that all (major) cities are alike, and the same goes for 'the country'.

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# CHAPTER 2

## Data sources

### 2.1 Venue data and Postcode

Foursquare.com recognizes hundreds types of venue, and has lots of information about these venues. This report will gather only venue-type and location data from the api. The location data will be longitude and latitude and Postcode. The postcode in the Netherlands has the following system. It consists of 4 digits and 2 uppercase letters, i.e. '3755 GB'. The combination of postcode with a number identifies a unique address. On Postcode.nl one can see that 3755 GB is restricted to street 'Rietgors' in the village Eemnes, and only odd numbers from 49 up to 73. The postal services used this system to make efficient (walking) routes for their 'last mile' in delivering letters. A lot of statistical data is grouped on postal code as well so it will serve as a key in connecting several data sets.

Venue types in foursquare amass in the hundreds, which is too much finely grained for this research. When examining the customer base for a Italian restaurant it makes more sense to combine all cuisines into one type: 'restaurant'.

### 2.2 census data, and postcode revisited

PDOK, [www.pdok.nl](http://www.pdok.nl) is a website disclosing Dutch governmental geographical data from all layers of government. National, regional or dedicated institutions. In Holland an institution exists just for focusing on government of waterways, irrigation and groundwater(levels). One of the datasets provides is CBS\_PC4\_2017. It is a shape- file, published under creative commons license which contains amongst others the following information.

- Postcode shape-files, to a level of PC4. IE only the numerical digits
- number of citizens (total, men, women)

- number of citizens (in age-classes)
- income (relative to national levels)
- distance to nearest hospital. this will be used to check completeness of foursquare data, and distance calculations
- distance to nearest supermarket. this will be used to check completeness of foursquare data, and distance calculations

The postcode shape-files are only recently published in such a way. Before the postal services asked steep prices for these datasets.