

THE GEOGRAPHICAL INFORMATION SYSTEM APPLIED TO RETAIL MARKETING

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Abstract

The purpose of this report is to introduce and explain the benefit within market research of the new informational tool named The Geographical Information System. The utility of the GIS is especially interesting in segmentation studies within the geographical expansion of Retail Marketing.

The basic utility of the system is the capacity of combining any database with either a concrete geographical point or zone and, moreover, the ability to data process.

The application of the GIS toward market research has the following advantages:

- a) The capacity to process statistical data rapidly by using one or several data bases.
- b) The statistical analysis can be applied to any scale ranging from a city block to a state area.
- c) The cartographic visual display of the data base and the statistical analysis creates the easiest, fastest and less risky method of making strategic decisions.

The methodology the we propose is based on three phases:

1. Consumer segmentation
2. Geographical segmental location
3. Location study

1.- Consumer Segmentation

1.1 - *Segmentation Definition*

The market is a group of individuals in which each one has its own particular characteristics. Therefore, we aim to regroup these particular individuals in order to be able to better manage the company strategy and to maximize their resources.

Segmentation is a process able to be influenced by analysts. Since the market is not divided, the analyst divides it work for his own interests.

Therefore, a tool like the GIS becomes absolutely indispensable to achieve the best actual market understanding.

1.2 - Geographical segmental location

- **Socioeconomic variables:**
These are the traditional variables used to divide the market. Actually, except in certain cases, they are the complement of other variables. These variables are: sex, age, level of studies, income level, number of dependents, level of domestic possessions...
- **Expected advantage:**
The advantage produced is both a segmentation variable and the variable which shows business positioning, which is the main difference from the competition.
To best comprehend the factors needed to achieve market satisfaction, we can either directly analyze the market or make a conclusion from the rest of the segmentation variables.
In any case, it is this variable that expresses this business concept. Thus, the main reason in the decision making process is our goal.
We can normally divide a variable by function, symbol and sensory.
- **Lifestyle**
The hypothesis is that many different people in socioeconomic variables can have very similar behaviors and vice-versa.
Lifestyle is mainly composed by activities, attitudes and opinions.
This variable is very common within market research in large metropolitan areas.
- **Buying Behavior**
This variable aims to understand the consumer's role in the purchasing process. It is necessary to know the function of our target: the influence, the prescriber, the buyer, the consumer or the final user.
It is also important to understand the fidelity level and purchasing frequency.

The basic tool used to find segments within market research is the survey. The survey can be associated to either a point or a geographical area. The mix between the field surveys and the digitized maps is able to be solved by using a common code.

2.- Segment Location

The GIS offers to the analyst the possibility of working with a highly functional tool to define the location strategy for Retail Marketing companies: the geographical visual displays of these segments.

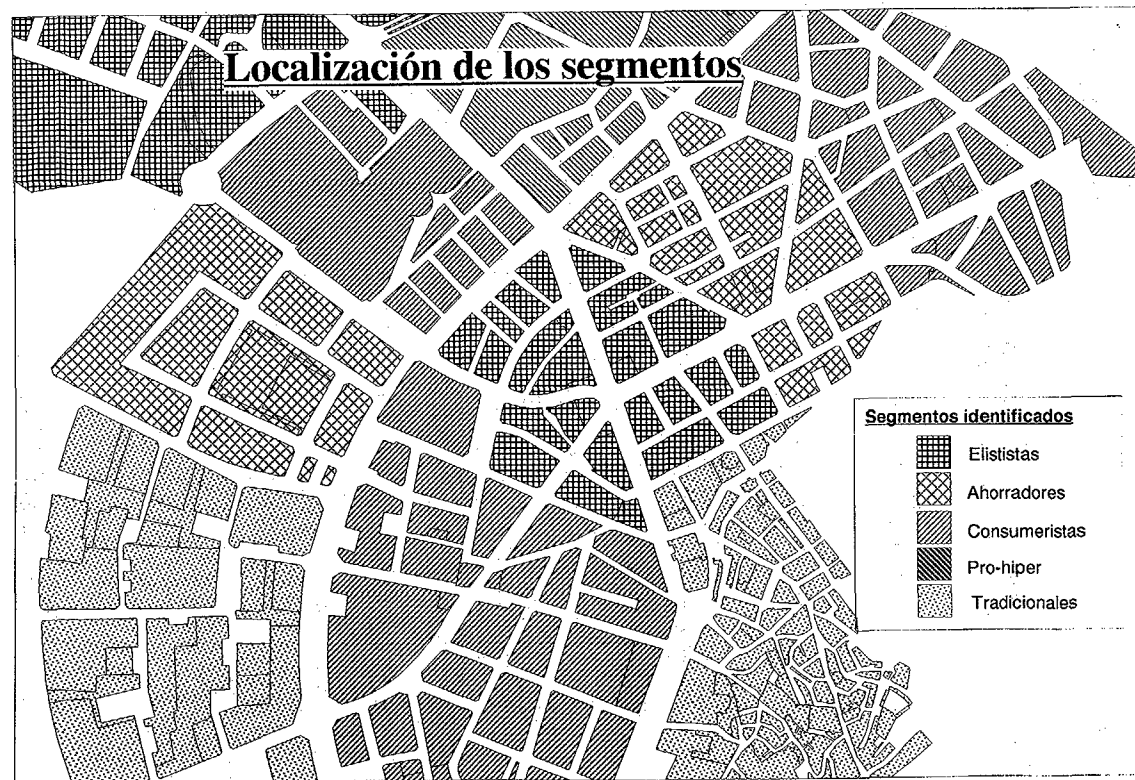
The usage of the GIS within location strategy is justified by realizing that consumers are unique but at the same time realizing that they compose homogenous geographical zones.

People with similar characteristics (segments) tend to adapt the same lifestyle and to live in the same geographical environment. (Refer to attached map)

The geographical location segment is essential for:

- maximizing communicative strategies
- establishing new locations

Localización de los segmentos



3.- Location Study

Once we know our target group and its location, the next expansion strategy phase is: to maximize the new establishments.

Again, the application of the GIS is recognized as a tool of extreme potential within the processing of information. Only the GIS allows for a concise and understandable view of all of the information necessary to make decisions. This information is the following:

3.1. *Sociological data.*

By using the GIS it is possible to achieve multiple representations of the different socioeconomic variables (age, sex, level of studies, income level, number of dependents and domestic possessions...).

3.2. *Competition.*

The localization of all competitors that compete directly or indirectly by using a retail audit¹. The visualization of the map allows locating the homogenous zones according to their commercial offering.

3.3. *Urban city structure and function*

Urban layout, architectural barriers, population movement, focal points....

3.4. *Accessibility*

Access is a variable measured by time. The study is created by using isochrones, which are the measurements of time used leaving from one point and arriving to another. The isochrones both show the method of transport, whether by foot, or by public or private transportation.

3.5. *Segmentation Results*

Once having decided which is the key variable of segmentation we are able to represent the different segments on the map and know where our target group is located.

In summary, the analysis of these variable from a geographical standpoint allows us to:

- the reach of influence within a certain area
- market quotas
- the calculation of potential sales
- the determination of locating new establishments

¹ A retail audit is an intensive field study of the current commercial offering.

