ABSTRACT

TITLE: “Diagnosis of the public transport in working days in Catalonia”

AUTHOR: Marc Alsina Martí

TUTOR: José Magín Campos Cacheda

ABSTRACT: One of the characteristics that define the nowadays society is, without any doubt, the mobility. To avoid saturation in the street network of Catalonia, we have to bet for a good service of the collective public transport (TPC) because it is, at present, the only solution to the increase of the private transport. This service has to be efficiently useful to the whole of Catalonia, not only to a part of it. This is why this dissertation analyses the disposition of public transport to the Catalan country, analysing each region to be able to say which ones have a good availability and which have a deficit of the collective public transport.

Obviously to do this survey, information in detail has been observed of all the lines of (buses and railways) that exists in Catalonia and from this information, a data base has been developed.

The survey has been carried out combining; on the one hand the number of diary expeditions in TPC, and on the other hand a series of variabilities which give vital information of each region. There have been four different kinds of expeditions: total expeditions, internal (intraregional) expeditions, interregional expeditions connecting with some of the four capital cities of the province and finally interregional expeditions without any connection with any of the capital cities. The variabilities that have been used are: the population, the urban area, compulsory mobility and compulsory mobility in collective public transport. There have been made combinations with variabilities that have given sixteen partial indicators which offer detailed information about the aspects or kinds of expeditions showing a deficit or not in the different regions. All of these indicators have been normalised to obtain a value between 0 and 10 and in this way they have been able to be compared. The four indicators have also been pondered over to a kind of expedition, having in mind determinated weights for each of the variabilities, according to their importance. Finally, a global measured indicator has been achieved, this includes all the indicators and this is the final mark of each region. It can be easily observed with this indicator if a region has good or bad results, although to analyze it more in detail, it would be necessary to study in depth the partial indicators.

The diagnosis of the collective public transport in Catalonia has been made in three different stages; through regions, through provinces and through “vegueries”, which is the new territorial distribution that the present Government wants to impel. As a result of these three analyses, the dissertation has an improvement proposal in the regions that are below the average of Catalonia. This proposal is based on the implantation of new lines and the increase of the frequency of some of the present ones with the clear objective of balancing the present lines of the disposition of the collective public transport. Moreover, with the posterior calculation of the indicators it can be seen that the improvement proposal of this survey improves, achieving better results in the fact that the regions have more uniformed results. Finally, it has been made an approximate calculation of how much to implant these improvements will cost.