

LOCAL LABOUR MARKETS AND ACCESSIBILITY CONDITIONS IN THE ISLAND OF TENERIFE

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I. INTRODUCTION

The accessibility intended as a measure of connectivity between place of residence and place of work through the transport system, determines the configuration of the Local Labour Markets (LLM). The aim of this paper is the analysis of the location accessibility and the mobility conditions of LLM in Tenerife. Making use of the information about the daily mobility of the working population available in the 2001 Census of population and housings, the municipalities of LLM with a level of self-containment greater than 80% are classified. The indexes of accessibility with competition (*floating catchment area method*) for employments corresponding to three limits of time (20, 30 and 40 minutes) are estimated by means of a GIS, using the entities of population as origins and the municipalities as destinations.

II. THE MLT

The LLM can be defined as spaces where most of the labour resident workforce can find or change employment without changing the place of residence, as well as they can change residence without they should take prepared a change in the place where the individuals realize their activities. Therefore, LLM become a crucial analytic tool to design labour policies for subregional areas which implies the division of a space in different zones in consideration of the labour daily mobility of the resident population in the same one, in the sense that the places of work and of residence of the working population in the above mentioned space are considered as definition elements of these economic - functional areas.

Table 1
INDICATORS OF SELF-CONTAINMENT OF LLM IN TENERIFE

LLM	Demand		Offer		Labour attraction 2001
	Occupied by place of work	Self-containment	Occupied by place of residence	Self-containment	
TF SOUTH	68.813	77,17	59997.591	92,20	1,19
TF NORTHWEST	145.222	92,90	150.524	89,63	0,96
TF NORTH	38.140	81,66	41.013	75,94	0,93
OTHERWISE	8.334	73,53	11.381	53,84	0,73

Source: INE: Censo de Población y vivienda 2001.

III. ACCESSIBILITY

The concept of accessibility has had several meanings, such as the quantity of effort that a person must realize to come to a destination or the number of activities that can be reached from a certain place. Even being a term very used in tasks of evaluation and planning, it does not have the unique definition. In a geometric sense it can be intended generally as nearness. Thus, the accessibility, intended as a measure of the connectivity between the places of residence and the places of work across the system of transport, determines the configuration of LLM.

Nowadays, the accessibility is not considered to be a mere indicator of the nearness, since this one can be different for different groups of persons, as consequence both from their needs and from their characteristics as individuals, though they have the same location. There exists an extensive relation of the different ways of conceptualizing the term accessibility, which they are going from the accessibility that tries to measure the efficiency in the network of transport, the type of analyzed space and the characteristics of the service to evaluate, up to the particularities of the demand and of the model of accessibility used. This diversity obeys different answers for diverse situations and aims, which have given like proved the instrumental enrichment of the analysis of the accessibility.

According to the survey *Movilia 2000*, on the daily mobility in Spain, the average time of displacement to the work is 26 minutes in Canaries, for what the measures calculated in this work are contour indicators with a temporary barrier of 20, 30 and 40 minutes.

IV. THE CALCULATION OF THE INDICATORS OF ACCESSIBILITY

This analysis considers the accessibility from the origins (places of residence) towards the destinations, which are the working places. We base on the definition of the accessibility of a point of origin towards all the other points of destination, with the way of transport private vehicle. For it, we estimate an integral indicator that bears in mind the labour competition of the residents in the areas contained in the temporary barriers defined across the Floating Catchment Method, instead of using an administrative or censal border for the calculation

of the indicator of accessibility. This method defines areas about the geometric center of a municipality with a temporary limit.

This indicator considers the working places of every accessible destination, in a given time, for the «labour competition»¹, understanding the «competition» of every destination as the workers and students, independently of their training and occupation, who use the private vehicle and who can come to the destination in the same time from another municipality, as well as all the students and workers of the same municipality.

Therefore, the impedance function (1), with which we obtain the index of accessibility, reflects the temporary restriction assigning 0 if the time of trip is higher than the maximum given, and time 1 if the time of trip is lower. So that, the destinations of value 0 are not accessible under a temporary given restriction, whereas the destinations of value 1 can be reached in times lower than the established limit.

$$A_{i,comp} = \frac{\sum_j O_j * f(c_{ij})}{\sum_k T_{coche_k} * f(c_{kj}) + T_j} \quad (1)$$

with $f(c_{ij}) = 1$ for $c_{ij} > t$

$f(c_{ij}) = 0$ for $c_{ij} > t$

where:

$A_{i,comp}$ the accessibility with competition in origin i

O_j are the opportunities at destination j

$f(c_{ij})$ is the impedance function

t is the maximum time of trip in minutes

T_{coche_k} and T_j are, respectively, the workers who come from another municipality k and all the workers who are employed at the municipality of destination j .

Once calculated these indexes of accessibility for each of the origins, there are established the zones of major or minor accessibility. We define as *strategic position* that one that has a high index of labour accessibility with competition, that is to say, the position that allows to reach from the place of residence the major number of working places in a maximum time of displacement, taking into account the potential competitors: The stable familiar units tend to look for the stabilization of the cohabitation and try in their labour strategies to select the new opportunities of employment, between others, for being accessible across the daily mobility, without there has to be modified the place of residence of the whole group. The studies on the homes of two incomes indicate minor tendencies to the migration in these units, since they try to combine several places of work with the unique place of residence.

1 The concept of «competition», as it is used later, is restricted to the potential competition between all the workers, that is, it does not bear in mind the segmentation of the labour market and the degree of real competition between workers.

CONCLUSIONS

In case of the threshold of 20 minutes, the major labour accessibility is given in the municipalities of the North-east and of the South. The explanation in the last case owes to the scanty labour competition that the residents have in the zone of Adeje and Guía de Isora, if we border the time of displacement to the work to 20 minutes.

The map of accessibility with competition of 30 minutes emphasizes the South zone as the best strategic position, as it happens in the coast of Fasnía's and the north of Arico. Thus, it confirms that Arico is not ascribed to one of two bordering LLM, North-east or South, since the residents come to both LLM in less than 30 minutes.

Nevertheless, as the time devoted to the displacement to the work increases (40 minutes), the accessibility diminishes in the municipalities of the North-east, is kept in those of the South and rises considerably in Arico, Fasnía and Güímar, both in the coastal zones and in interiors.

In any of the cases, the calculated indexes determine a minor labour accessibility for the municipalities of the LLM Northwest. This analysis of the conditions of accessibility of the daily mobility between the places of residence and work throws results that it is possible to characterize, in general terms, as relatively good. Most of resident population in Tenerife, around 80 %, uses less than half an hour to come from his house to the place of work and the natural positive correlation is detected between the time used in the displacements and the overcome distance.

In the metropolitan area of Tenerife, the workers can accede from their places of residence to a wide number of relatively nearby employments, but they have to accept a low speed of displacement when they try to overcome these relatively short distances.