



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

Departamento de Economía y Ciencias Sociales

**Análisis de áreas comerciales mediante técnicas SIG:
Aplicación a la distribución comercial y centros tecnológicos**

TESIS DOCTORAL

Presentada por:

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The main aim of this thesis was to broaden the research into the geographical distribution and location of both commercial and establishments and technology centres using geographic information systems (GIS).

The thesis consists of three chapters, each containing a paper that has been published in an international journal and that tackles a specific area within the scope of the thesis outlined above.

The first paper, *“Business opportunities analysis using GIS: the retail distribution sector”*, focuses on the retail sector. More specifically, it looks at the distribution of retail outlets and the pursuit of a retail location strategy that can act as a differentiating factor and creator of competitive advantages. The paper presents a process that allows retailers to identify new business opportunities.

The second paper, *“The retail site location decision process using GIS and the analytical hierarchy process”*, presents a method of determining the optimal location for a retail outlet by combining techniques from GIS and multi-criteria decision models, namely the analytical hierarchy process (AHP). The methodology yielded the main factors that affect the success of a supermarket (location and competition). It was then applied in a practical setting to determine the location for the opening of a new establishment.

The third paper, *“Comparing Trade Areas of Technology Centres using Geographical Information System”*, focuses on the analysis of the geographical distribution of firms from two technology centres from different sectors: AINIA (Association for research into the agro-food industry) and AIJU (Association for research into the toy industry). The geographical spread of firms from the technology centres was found to follow non-random spatial grouping patterns. The study yielded results that may contribute to the design of marketing strategies for technology centres.