

# 1 Introduction: Objective and Scope of the Study

Project teams from five Institutes and European Universities - Universities of Montesquieu-Bordeaux IV in Bordeaux and Social Sciences in Toulouse, the University of Lisbon, the Institute for Regional Development in Seville and the Autonomous University of Madrid, acting as coordinator - have undertaken the following analysis of the aerospace industry in Southwestern Europe. The study encompasses the area from Aquitaine and the central Pyrenees in France to the Iberian "V" formed by Madrid in the extreme east of the vertex, Seville-Cadiz as the southern point and Lisbon as the western vertex. The area has undergone profound changes within the aviation sector, and in particular, civil aeronautics, over the last 25 years.

The epicenter of this change in Europe was the formation and progressive consolidation of Airbus in the 1970s, which later culminated in the formation of the firm EADS in 1998. EADS has drastically changed perspectives in the aerospace industry, even at the global level. The main characteristic of EADS is that its formation was strongly influenced by the states that originally created them. The creation of a European firm based on the willingness of four European states, clearly demonstrates how far one has come from those not so far away years in which these same countries were in conflict. Is this the first truly European firm in the sensitive aerospace sector? Was this sector not highly related to "national" defense? But the change has not only been due to the political will of the governments but also to a robust project, underlying political change, to form what was to be one of the most powerful aeronautical conglomerates of the 21<sup>st</sup> century.

Change has affected all the variables involved in the industry, from conglomerate and firm property, industrial organization, in-house production and externalization to the behavior of institutional agents including the territories themselves. Moreover, all of these actions have been possible due to the extraordinary contribution of technical change evident in the steady increment in knowledge in society in general and in the aeronautical firms, in particular.

It would be difficult to find an industrial sector that has undergone so many intense changes in such a sensitive activity. Besides the intensity of change, the most obvious transformation in the industry has been the evo-

lution of its institutional framework which was originally firmly anchored in the state, often considered "state policy", but has progressively moved away from the public sphere toward market modes of production, organization and ownership.

The industry's production model has evolved from an arsenal mentality, in which everything critical to building the product was made "in house", to an externalization process for more and more airplane components. This has brought about the appearance of a large number of small and medium firms in the industrial fabric which, depending on their technological and financial capability, eventually find their place within the value chain of contracting and subcontracting involved in the process of building an aircraft.

The organizational model has substantially changed as well, from highly centralized management tinged with aspects of a ministerial appendix, to transnational firms with decentralized management at various headquarters. In the new model, cost management, the goal of productivity, information technology and globalization, in its dual aspect as demander of inputs and knowledge and suppliers of goods and products, clearly define the present and future of the European aeronautical industry.

Strong ties to public property have increasingly given way to private ownership. However, the fact that civil aviation firms and, particularly, space and military firms may now be more distant from the public sector does not mean that there are not still close relations to the respective governments. This is true both for ownership and organization of the firms as will be shown in this report.

Chapter Two will analyze the basic theoretical aspects needed to understand the origin and evolution of the European aerospace sector from the first dreamers at the beginning of the twentieth century to the incorporation of the sector into national defense, making it a priority objective in state policy. Then the increasing significance of EADS will be described, its origin, main actors in its formation, participants and the complex structure of production and assembly locations, as well as its ownership and firm participation, whether subsidiary or not. An analysis of the industrial, organizational and financial model of EADS follows in which special emphasis is placed on the network of suppliers and their hierarchy (from the manufacturers of entire aircraft systems, legally and financially independent of EADS, to those firms located farthest from the technological frontier) which make up the broad base of enterprise associated through subcontracting. The chapter ends with a profile of the last airplane to exit Airbus factories, the A-380. Its basic characteristics, the technological effort required to build it and each country's participating firms and shares