## From raw materials to where the industry happens. Patterns of industry location in the Portuguese cork manufacturing industry, 1880–1980

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## Summarized version

The spatial inequality of economic development is one of the most important subjects in economic analysis. The location of industrial activity is essential in this respect due to its capacity for transforming an economy. As such, the presence of industry is usually identified with development, and its absence with backwardness. This is even more relevant during the industrialization of an economy. This article discusses the location of the cork industry, one of the most important sectors of the Portuguese economy, during the industrialization of this lberian country between the late nineteenth century and the late twentieth century. Initially gathered near the raw material sites in the more inner regions – particularly Alentejo and Algarve – the Portuguese cork industry significantly changed its economic geography twice within a century: first towards the Lisbon Metropolitan Area in the early twentieth century, later to the Porto Metropolitan Area from the 1960s onwards.

Thus, the main goal of this research is to identify the characteristics of the regions that attracted the cork industry and that, consequently, help to explain the successive changes in the industrial geography of cork in Portugal. While not a new issue in the Portuguese economic historiography, to the date it has been treated in a more theoretical and qualitative way. In this article, therefore, it is analysed the location factors identified in previous studies, adding, whenever possible, a quantitative expression. In order to obtain the necessary data, two type of sources were explored. With a regional scope, industrial statistics produced by the Portuguese State between 1881 and 1986. These gather data on the location of factories and workers along the Portuguese territory, as well as the paid wages and levels of qualification of human capital, among others topics. At a company level, allowing to understand specific matters such as the evolution of transport costs, information costs, industrial characteristics and business strategies, it was possible to use the documentation of cork industrial companies such as *Sociedade* 

Nacional de Cortiças, available at the Barreiro Municipal Archive, and of Sociedades de Cortiças, kept in the Santiago do Cacém Municipal Archive.

The conclusions point that the initial location of the cork industry near to the southern cork forest seems relatively easy to explain. Given the industry's high information and transportation costs, the logical thing was to locate the industry near the raw material. Later, by the early twentieth century, however, Lisbon's industrial belt had started to offer certain advantages that contributed to the increase in its ascendance as the main location for the cork industry. The workforce, in the same period, had become literate and less expensive, and although increasing mechanization did not require more specialized human capital, the growing number of different large industrial companies did as they increasingly hired workers for technical and administrative positions. Nevertheless, even though the more skilled workforce around Lisbon was not in itself an advantage in terms of relocation, both information costs and transport costs had fallen considerably: the former because of the networks of local agents in the forest areas that had started to develop in 1870s, and the latter because of the development of the railway.

In this scenario, the movement and establishment of cork processing factories in locations with better access to external markets –namely, the port of Lisbon– in a region of progressively greater industrial concentration and close to the main Portuguese city, presumably allowed large companies to benefit from the inherent advantages of the concentration of industry in particular areas. Those advantages were several. First of all, regarding human capital, better qualification and greater labour supply. Moreover, the inclusion in a large urban area also meant easier access to technical and specialized services related to production, while the higher concentration of companies led to a reduction of transaction costs since there is evidence of strong cooperation in the cork industry. Finally, in a combination of all these factors, there was a possible creation of an "industrial atmosphere," as Weber claimed, that promoted the creation of innovation and knowledge. As a matter of fact, it is precisely these factors that economic historiography identifies as having been responsible for the growth of inequality in industrial concentration, both in Spain and in Portugal, especially from the late nineteenth century onwards. As such, the (re)location of the Portuguese cork industry followed the pattern of Iberian industrialization in general.

However, the industry later moved northwards in a seemingly peculiar movement that took it further away from the raw materials and towards an urban area of a comparable size, although a little smaller than that of Lisbon. In this case, three factors stand out in terms of

explaining the move: the cost of human capital; business strategies, through the specialization of production in cork stoppers rather than agglomerate; and the growth of a large anchor company that allowed for the creation of a network of small companies that were free from the restrictions of a highly bureaucratic economy. Unlike in the previous period, public policies exerted an influence, namely the creation of the conditions for cheaper labour in the north. Private initiatives, through business strategies that favoured the production of cork stoppers and Amorim's success, also contributed considerably to this process. When dealing with private initiatives, personal factors must be taken into consideration as regard the localization of economic activity, which is confirmed by the example of the Portuguese cork sector and of *Amorim & Irmãos* in particular.

Like in many other recent studies, the factors that apparently explain these movements of the cork industry from one part of Portugal to another can be found either in Neoclassical theory —transport costs and the comparative advantage of endowment factors —or in New Economic Geography —the effect of large markets. Therefore, it can be concluded that factors from both theories matter, as does happenstance, since Amorim established its business in the north because of personal factors relating to its founders. Finally, it should be noted that it is possible to reconcile public policies with high economic success, as was the case with the concentration of the world leader Portuguese cork industry in Porto MA, despite the theoretical optimum location being elsewhere. Although this article has no direct applicability to the design of public policies aimed at correcting territorial inequality in the Iberian Peninsula, it does highlight that it is possible to design policies that can stimulate the location of economic activity in specific areas.