Key Innovation Drivers in Maritime Clusters

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ABSTRACT

This research studied the structuring forms of industrial maritime agglomerations as a means of obtaining leverage capabilities for the development and diffusion of new technologies among its actors. More specifically, we’ve researched how three successful international maritime clusters are structured to foster the innovation and also if they have common key elements (drivers). The findings showed that the three clusters have common drivers that favor technological developments. The study is being done in view of the recent revitalization of Brazilian shipbuilding industry and that research would identify what could benefit from international experience to collaborate with a more sustainable development of Brazilian industry.

KEY WORDS: Innovation drivers; maritime cluster; spillover; technological innovation.

INTRODUCTION

There are many maritime clusters and industrial centers spread across all continents. Many of them have developed endogenous processes of revitalization of their abilities in order to make them not only technologically flexible and prepared for new challenges posed by competitors or consumers, but also forming new currents of thought, new habits and needs. For many years scholars have been studying the many ways in which individual companies included in industrial clusters earned benefits. The first published studies on the topic were written by Marshal (1920).

Empirical research in the organizational management area demonstrates that industries with regionalized interfirm cooperation perform better in the face of competition than companies acting alone (Porter, 1985). In the block cluster, actors can have a better absorption of changing demand and the compound of internal competition through a collaborative spirit (which is the very essence of cluster formation) which are just some of the key drivers for creating stereotypes of innovative companies. The importance of interfirm cooperation becomes even more obvious when we consider some distinctions of this organizational model established on the basis of information and communication technologies, which require increasingly high levels of interaction to innovate. Hayes et al (1988) already established at the time, the importance of training organizations toward the learning process, in an extremely competitive international scenario demanding high capacity for learning and innovation to face global competition. Many other studies (Bell, 2005; Hoffmann et al., 2008 and 2011) also infer that the willingness of enterprises in production networks, consortia, associations or clusters have enabled major technological evolutions among its members as opposed to individual companies. This organizational knowledge gain among members of networks or cluster has been reported as the main factor of technological growth and gain in competitive advantage (Porter, 2000; Hoffmann et al., 2008 and 2011; Klink and Langen, 2001).

With this perspective in mind, we will search the bibliography for some of the major enablers of the key drivers in shaping innovative maritime clusters, comparing them and drawing conclusions that although are restricted to the clusters analyzed, they can always serve as beacons in better understanding the functioning of innovative maritime clusters. Our proposal is to provide a comparative overview and not an in-depth analysis, which would require more empirical research to support the conclusions. This is an exploratory analysis within clusters in Europe, Asia and Oceania. Each of these clusters holds the primacy of international trade in its sector. The shipbuilding industry cluster in Norway sustains the position of being the market leader in the production and supply of "High Value Ships", while Korea is the world's largest manufacturer of current "Standard Ships". Moreover the maritime cluster of Tasmania holds world leadership in the production and marketing of special aluminum boats. They represent three different systems in three continents, although far away from each other they have a lot in common.