Title: Production Efficiency of the Tuna fleet of Azores and Madeira: a technical and strategic analysis

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Abstract: Tuna fishery is the main one, in quantity, for both Azores and Madeira Atlantic islands and for Azores it is decisive for the survival of the local tuna canning industry. The main catches are from skipjack and bigeye tuna species, the last one with TAC restrictions. From a strategic perspective it is important to take in account not only the state of the stocks and the level of the catches but also the technical characteristics of the fleet and the socioeconomic dimensions of the value chain. Data Envelopment Analysis (DEA) was used to calculate the technical and scale efficiencies of the tuna fleet, both in cross sectional and longitudinal studies. While the type of boats, the technology, the seasonal production pattern and the fishing areas are similar, there are large differences penalizing the Azores fleet that increases when landings are price valued. The results show the reasons why, that are mainly, for the quantity landings, the scale effect and, for the value landings, the market power of the canning industry. A systemic analysis is then used to integrate different dimensions of the value chain, from the fisheries to the canning industry exports. Since the canned tuna global market is highly concentrated the important local industry press the landings price, so the tuna vessels needs to enlarge its seasonal and spatial production frame to survive.