El Niño and Fishing Location Decisions: The Chilean Straddling Jack Mackerel Fishery

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Abstract

Fishery management of straddling stocks is conditional on available knowledge about relevant environmental shocks, such as *El Niño* events, affecting stock behavior. But knowledge of these issues is scant, particularly in developing world fisheries. Using per-trip, geo-referenced data for the period 1994–2004, we test the hypothesis that sea surface temperature anomalies related to *El Niño* events have systematically induced the Chilean fleet exploiting the Chilean (straddling) jack mackerel stock to fish beyond the 200-nm zone more frequently and farther south (than its traditional fishing grounds) than in the absence of *El Niño*. We take this as an indirect testing of *El Niño*-triggered effects on the spatial distribution of the Chilean straddling jack mackerel stock in the southeast Pacific. While measuring environmental variability, we also control for regulatory regime shifts, fleet technology features, and seasonal and price effects. Our estimation results clearly support the stated hypothesis.

Key words: Fishing location models, jack mackerel, straddling small-pelagic fishery, *El Niño* phenomenon, open seas fisheries regulation.**JEL Codes**: Q22, C23, C25.