

A REAL OPTIONS APPLICATION TO THE FISHING VESSEL SCRAPPING DECISION OF
VESSEL BUYBACK PROGRAMS

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Abstract

This paper adopts the real options approach to examine vessel owners behavior in deciding whether to participate or not in the vessel buyback programs. The model allows us to investigate profit uncertainty in a decision to retire an aged vessel and the underlying value of waiting for new information about the profitability of such a change, which may affect the willingness of vessel owners to participate in the vessel buyback programs. Our analysis shows that the government needs to pay more attention to profit uncertainty, which may invalidate the vessel buyback program that does not take it into account. This also contributes to explain the failure of most of the vessel buyback programs aimed at encouraging the retirement of aged vessels in Taiwan. We also evaluate the value of willingness to accept of vessel owners and its policy implications are discussed.

Keyword : real options, vessel buyback program, vessel-scrapping decision, profit uncertainty