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CUIMR-X-85-006 C2

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Technical Innovation in the Pacific Coast Commercial Trawling and Salmon Trolling Fisheries

By

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B.S. (University of Redlands) 1968
M.S. (Humboldt State University) 1970

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DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Ecology

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA

DAVIS

Approved:

Committee in Charge

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December 1985
Ecology

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Abstract

The adoption/non-adoption of technical innovations was examined in two important Pacific Coast commercial fisheries. The purposes of the study were to gain insight into the innovation process in commercial fisheries and to test a new model of innovation adoption/non-adoption. The model was based on recent conceptual issues raised in the innovation diffusion literature and a working knowledge of the fishing industry. Included in the model were variables measuring each fisherman's personal characteristics and situation, attitudes about fishing, and perceptions of each innovation's attributes. Innovations examined included both fish catching technology and safety equipment.

Personal interviews were conducted with 83 randomly selected trawlers located between Newport, Oregon, and Santa Barbara, California, during February through April, 1984. Questionnaires were mailed to a random sample of 1500 licensed California salmon trollers in April, 1984, with a 33 percent return rate (494 useable responses).

Logistic regression was the primary statistical method used to analyze the survey data.

The findings generally support recent conceptual issues raised by Downs and Mohr (1976) and other innovation researchers. A different subset of independent variables explained the adoption of each innovation. This appears to be due to the innovation-by-innovation differences in the match between the potential adopter and the innovation. The effect of variables on adoption/non-adoption varied across innovations. This instability can be explained primarily by idiosyncrasies of each innovation. Both the characteristics of potential adopters and the characteristics of the innovations, as perceived by the potential adopter, were important determinants of adoption/non-adoption.

The trawl and salmon troll fleets were in a period of extreme difficulty in 1984. Many fishermen were trying to lessen or end their financial commitment to fishing. The findings of this study have important policy implications for the fishing industry, fishery management agencies, and Extension and development programs.

Project Leader: Robert Price
Project Number: A/EA-1
California Sea Grant College Program