

the United States, such as agriculture, with all of the attendant drawbacks when it comes time to trade in these goods. As the sector becomes more domestic, other problems will exhibit themselves, not the least of them being the global impacts of occurrences which lie principally outside of the sector. If trade in intermediate goods is principally confined to wholly domestic processes, it is unclear at this time how competitive these processes will be after foreign resource holders and producers adjust their own property rights expectations and develop their own trade policies toward fisheries.

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Interdependencies Among Fisheries Management, Fisheries Trade, and Fisheries Development: Experiences with Extended Jurisdiction. Discussion

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The task given to these authors of describing the interrelationships between fisheries trade, development, and management was enormous. Rather than trying to cover all the interrelationships, they have chosen to focus on two that

they feel are important: 1) The endogeneity of the level of property rights and the pattern and terms of trade of a nation, and 2) the effect of exogenous factors, particularly global macroeconomic trends, on trade. The bulk of the paper is devoted to the first topic because it requires greater theoretical development and is inherently more complex than the treatment of exogenous factors. There-

fore, I will dispose of my comments on the exogenous factors section first, and then address the property rights issue.

The importance of exogenous factors to fisheries trade is demonstrated in a simple, but effective, way. Comparison of trends in fisheries imports and exports are made to the trends in other commodities. Figures 4 and 5 demonstrate the remarkable similarities in these trends, making the case for the influence of macroeconomic factors. However, these same diagrams are also striking in the dissimilarities between fisheries and the other commodities. In particular, for both imports and exports, the sharp increase of the 1970's starts a year earlier and the response is greater than the other commodities.

One of the reasons for the increase in exports, the fortuitous events in the U.S. salmon market, is discussed in the text, but an even more significant event was the increase in king crab exports from \$11.9 million in 1976 to \$29.0 million in

1977. This, too, was not a direct result of the MFCMA, but a short-lived boom in a fishery that collapsed in 1983. This lends further support to the theory that the MFCMA did not have a major impact on U.S. seafood trade. The policy implications of this are not discussed, but it certainly brings into question the effectiveness of active Federal promotion of U.S. exports (trade missions, fish-and-chips allocation policy) when global macroeconomic and biological events are the main drivers of the system.

This paper, however, acknowledges that underneath the fishery sector responses to exogenous forces, there are institutional changes occurring within the fishery sector that can be attributed to extended jurisdiction. The major premise of the study is that the vector of goods and services traded is not only a function of the demand for the goods and the cost of inputs, but also of the institutional arrangements, the level of expenditures to enforce these arrangements and the subsequent property rights (Fig. 1). Thus, examining trade by just looking at quantities and prices in the traditional trade models will not provide an adequate explanation of what is occurring. The remainder of this section is the authors' attempt at a generalized framework to introduce these institutional factors into the traditional trade model. I applaud this

approach and believe the authors are on the right track. For the United States there has clearly been a shift in trade patterns that do not show up in the statistics. The United States is heavily involved in counter-trading which is exactly what its fish-and-chips policy is. Joint ventures emerged only when the MFCMA made them a necessity.

I have one specific comment related to the equilibrium solution portrayed in Figure 3. The solution depicted is a specific solution to the problem when the objective is maximizing joint domestic and foreign rents. The marginal cost of foreign D&E to the home country is zero, as is the cost to the foreign country of domestic D&E. For each country, it is optimal for the other to supply all the D&E. Also, each country has its own marginal benefit curve depending on the allocation of catch. It is also possible that the domestic country will extract more rent from the foreigners by negotiating for a level of foreign D&E at which marginal cost exceeds foreign marginal benefits.

I believe the authors approach could be strengthened if a stronger tie is made to fisheries management. Enforcement of an exclusive economic zone will have different effects depending on the type of management that exists. In the typical U.S. case, there are strong property rights for the United States vs. the for-

eign fishing nation. However, within the domestic fishery there are weak or no property rights. In this case, replacement of foreign fishing by an open access domestic fishery results in a shift in economic activity to the United States, but not necessarily any welfare gains, and thus, no returns to defense and enforcement.

My final comment relates to an aspect of fisheries trade, management, and development not discussed in the paper, the impact of protectionist import policies and export development on domestic fisheries. Many involved in making those policies are basing their decisions on the conventional wisdom that protection from imports will raise the price received by domestic producers and the quantity supplied. The problem is that the outcome is not at all clear in an open-access fishery. Prices will surely rise, but quantity supplied may fall if the fishery is in the backward bending portion of the supply curve. The policy implications of these interactions are tremendous, given the current pressures for protectionist measures at the same time that fisheries managers are trying to limit domestic effort. Development and discussion of these points would have made for a more complete discussion of the major issues involving fisheries trade, development and management.