

Economical analysis of Chabahar fishery co-operatives

Abstract

One of the most important ways to develop fishery cooperatives is to increasing their profitability. Obviously, more profit will result in more investment and use of new technology as a motivation for development, in which improving the efficiency of fishing cooperatives will have an essential role. In this study, besides from estimating the efficiency of Chabahar fishery cooperatives and identifying their obstacles and problems, effects of production assets and income of fishermen were studied and some solutions were suggested to increase efficiency, reduce costs, improve profitability of members of fishery cooperatives. Thus, performances of fishery cooperatives were calculated using non-parametric methods and models combining data envelopment analysis and artificial neural network. According to the results obtained in this study, average economic performance of boats, small, medium and large Lendges was %63.51, %39.88, %30.65 and %51.69, respectively. Maximum error for calculating technical efficiency using artificial neural network was 8.24 percent and there was a maximum of 7.91 percent error to calculate the allocative efficiency using artificial neural which is not acceptable. Combination of artificial neural network and data envelopment analysis in estimation of efficiency of firms related to environment and natural resources has a high level of error and does not seem to be reliable, which can be due to non-measurable and omitted natural factors, including climate change, free water flows, fishing of other fishermen, water pollution.

Key words:

Cooperative, Artificial Neural Network, Technical Efficiency, Data Envelopment Analysis, Chabahar



University of Zabol
Graduate school
Faculty of Agriculture
Department of Agricultural Economics

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Supervisor:
Dr. A. R. Karbasi

Advisor:
Dr. M. Sabouhi Sabouni

By:
H. Ahmadi

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