

A review of production frontier research in aquaculture (2001–2011)

ABSTRACT

Most research works on the production frontier in aquaculture focus on efficiency measurement using either Stochastic Production Frontier (SPF) or Data Envelopment Analysis (DEA). The studies on productivity growth in aquaculture were limited, perhaps due to lack of time-series data. Nevertheless, total factor productivity analysis (TFP) in fish farms has started gaining popularity in recent years. In addition, the majority of the efficiency studies have centered on technical efficiency analysis but substantial increases in the output levels can be fully realized through improving overall economic efficiency. Therefore, this review suggests that future research should estimate all three efficiency indices (i.e., technical, allocative and economic efficiencies).

Keyword: Aquaculture; Efficiency; Production frontier; Productivity; Review