

Title: **Measuring Technological Change in Artisanal Fisheries: Evidence From Malaysia**

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Abstract: We compare the productivity of technology adopters to non-adopters using a cross-sectional survey of artisanal gillnet vessels on the east coast of Peninsular Malaysia. Technologies include cell phones, GPS, sonar, and mechanical winches for hauling nets. Stochastic frontier analysis is used to measure differences in production frontiers and technical efficiency scores. Adopters of mechanical net haulers had low technical efficiency, low labor productivity and high labor use. Electronics adopters were more productive than non-adopters on average, but difficult to distinguish from efficient non-adopters. This is the first paper that we know of to examine the role of new technologies in the production process of artisanal fishers. Our results suggest capital investments in new technology may tie the least successful participants to the fishery despite most respondents self-reported desire to exit. Impacts may be fishery-specific and ambiguous, so the consequences of technology subsidies should be carefully considered in development policy.