## *ABSTRACT*

*This study analyzes the effect of the number of fishers, large vessels, small vessels, active fishing gear, passive fishing gear, and extreme weather on the Gross Regional Domestic Product (GRDP) of the capture fisheries subsector, and compares these effects with the GRDP of the aquaculture subsector in the coastal regions of Central Java. The capture fisheries GRDP of the coastal regions fluctuates from year to year and does not always move in line with the number of fishers, fleets, and fishing gear, while extreme weather still affects most coastal regencies/cities every year.*

*This research uses a quantitative approach with panel data covering 17 coastal regencies/cities in Central Java over the 2016–2025 period, resulting in 170 observations. Secondary data were obtained from Statistics Indonesia (BPS), the Ministry of Marine Affairs and Fisheries, the Central Java Marine and Fisheries Service, and the National Disaster Management Agency. The production theory serves as the grand theory. Based on the Chow and Lagrange Multiplier tests, both the capture fisheries model and the aquaculture comparison model are estimated using the Common Effect Model; the aquaculture model uses cluster-robust standard errors to correct for first-order autocorrelation.*

*The results show that the number of fishers, large vessels, and small vessels have a positive and significant effect on the capture fisheries GRDP, active and passive fishing gear have positive but insignificant effects, and extreme weather has a negative and significant effect on the production side. Simultaneously, all variables significantly affect the capture fisheries GRDP ($F = 48{,}97$; $p = 0.0000$) with an $R^2$ of 0.6432. In the aquaculture comparison model, none of the fishing inputs has a positive and significant effect; only passive fishing gear and extreme weather have negative and significant effects ($R^2 = 0.2849$), indicating that the two subsectors have different production functions.*



***Keywords:*** *Capture Fisheries GRDP, Aquaculture GRDP, Number of Fishers, Fishing Fleet, Fishing Gear, Extreme Weather, Panel Data.*



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