

## **ABSTRACT**

*The industrial sector plays an important role in Indonesia's economic development and is also a major source of energy consumption and CO<sub>2</sub> emissions. This study examines the decoupling relationship between industrial growth and CO<sub>2</sub> emissions in Indonesia and investigates the factors associated with changes in the Decoupling Index (DI). The Tapio Decoupling Elasticity approach is used to identify decoupling conditions, while the Autoregressive Distributed Lag (ARDL) model is employed to examine the short- and long-run effects of final energy consumption, weighted energy price, gross fixed capital formation, and labour on the DI. The results show that the decoupling relationship varied considerably, with Strong Decoupling occurring most frequently in 10 of 25 periods (40.0%), followed by Expansive Negative Decoupling in 7 periods (28.0%). The ARDL-ECM results indicate that final energy consumption and weighted energy price have positive and significant effects on the DI in the short run, while gross fixed capital formation has a negative and significant effect and labour has no significant effect. In the long run, final energy consumption and gross fixed capital formation have negative and significant effects, whereas weighted energy price and labour have positive and significant effects. From an Islamic economic perspective, the findings indicate that industrial development should pursue economic benefits while maintaining environmental balance through responsible resource management in accordance with the principles of mizan, mashlahah, and amanah.*

*Keywords: Decoupling Index, industrial growth, CO<sub>2</sub> emissions, ARDL-ECM, Islamic economics*