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The Effect of Energy Consumption and Losses on the Nigerian Manufacturing Sector: Evidence from the ARDL Approach

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Abstract : The bounds testing ARDL (2, 2, 2, 2, 0) technique to cointegration was used in this study to investigate the effect of energy consumption and energy loss on Nigeria's manufacturing sector from 1981 to 2020. The model was created to determine the relationship between these three variables while also accounting for interactions with control variables such as inflation and commercial bank loans to the manufacturing sector. When the dependent variables are energy consumption and energy loss, the bounds tests show that the variables of interest are bound together in the long run. Because electricity consumption is a critical factor in determining manufacturing value-added in Nigeria, some intriguing observations were made. According to the findings, the relationship between LELC and LMVA is statistically significant. According to the findings, electricity consumption reduces manufacturing value-added. The target variable (energy loss) is statistically significant and has a positive sign. In Nigeria, a 1% reduction in energy loss increases manufacturing value-added by 36% in the first lag and 35% in the second. According to the study, the government should speed up the ongoing renovation of existing power plants across the country, as well as the construction of new gas-fired power plants. This will address a number of issues, including overpricing of electricity as a result of grid failure.

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