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**Analisis Pengaruh Pembangunan Proyek Pltu Kabupaten Batang Terhadap Pertumbuhan Ekonomi Kabupaten
Batang**
Wahyu Rizky, Dr. Romanus Yoseph Kun Haribowo Purnomosidi, M.Si., GRCP.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

INTISARI

Pembangunan infrastruktur energi skala besar diproyeksikan sebagai katalis perekonomian wilayah melalui efek pengganda (*multiplier effect*). Penelitian ini bertujuan mengevaluasi pengaruh Proyek Strategis Nasional PLTU Batang terhadap pertumbuhan ekonomi lokal Kabupaten Batang menggunakan pendekatan kuantitatif ekonometrika metode *quasi-experimental* melalui pemodelan *Difference-in-Differences* (DID). Data sekunder periode 2013–2023 bersumber dari BPS dianalisis dengan membandingkan laju pertumbuhan PDRB kelompok perlakuan (Kabupaten Batang) dan kelompok kontrol (Kabupaten Pemalang) sebelum serta sesudah intervensi. Model perluasan turut menyertakan variabel kontrol tingkat kemiskinan, TPAK, dan jumlah penduduk guna meminimalkan bias estimasi.

Pengujian pra-intervensi menunjukkan asumsi tren paralel (*parallel trends*) terpenuhi karena pertumbuhan ekonomi kedua wilayah. Hasil estimasi DID model dasar tanpa variabel kontrol (Model 1) menunjukkan koefisien negatif -0,0935 yang signifikan pada taraf 10% (p = 0,097). Namun, setelah menyertakan variabel kontrol pada model perluasan (Model 2), koefisien dampak bersih (*DID estimator*) berubah positif sebesar 0,0828 (0,083%) dengan nilai probabilitas 0,156. Karena nilai probabilitas melampaui batas kritis signifikansi alpha = 5% atau 10%) , disimpulkan bahwa pembangunan PLTU Batang belum berpengaruh signifikan secara statistik terhadap pertumbuhan PDRB Kabupaten Batang selama periode pengamatan.

Secara ekonomi, ketidaksignifikanan ini disebabkan oleh adanya *time lag* operasionalisasi mega proyek, serta hambatan transisi ruang akibat pembebasan lahan. Pemerintah daerah disarankan memperkuat kesiapan SDM melalui pelatihan vokasional dan mengoptimalkan rantai pasok industri agar efek pengganda investasi makro ini tertahan lebih besar di perekonomian domestik.

Kata Kunci: Pertumbuhan Ekonomi, PDRB, PLTU Batang, Difference-in-Differences (DID), Infrastruktur Energi.

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ABSTRACT

Large-scale energy infrastructure development is projected to catalyze the regional economy through its multiplier effect. This study aims to evaluate the impact of the Batang PLTU National Strategic Project on local economic growth in Batang Regency using a quantitative econometric approach using a quasi-experimental method using Difference-in-Differences (DID) modeling. Secondary data from the 2013–2023 period sourced from the Statistics Indonesia (BPS) was analyzed by comparing the GRDP growth rates of the treatment group (Batang Regency) and the control group (Pemalang Regency) before and after the intervention. The expanded model also included control variables for poverty level, LFPR, and population to minimize estimation bias.

Pre-intervention testing indicated that the parallel trends assumption was met because economic growth in both regions was synchronous. The DID estimation results for the baseline model without control variables (Model 1) showed a negative coefficient of -0.0935, significant at the 10% level (p = 0.097). However, after including control variables in the expanded model (Model 2), the net impact coefficient (DID estimator) changed to a positive value of 0.0828 (0.083%) with a probability value of 0.156. Because the probability value exceeded the critical significance limit (alpha = 5% or 10%), it was concluded that the construction of the Batang Coal-Fired Power Plant (PLTU) had no statistically significant effect on the growth of Batang Regency's GRDP during the observation period.

Economically, this insignificance was due to the time lag in the operationalization of the mega project and the spatial transition constraints caused by land acquisition. The local government is advised to strengthen human resource readiness through vocational training and optimize the industrial supply chain so that the multiplier effect of this macro investment is retained more strongly in the domestic economy.

Keywords: *Economic Growth, GRDP, Batang Coal-Fired Power Plant, Difference-in-Differences (DID), Energy Infrastructure.*