

DAFTAR PUSTAKA

- Abbasi, K. R., Abbas, J., & Tufail, M. (2021). Revisiting electricity consumption, price, and real GDP: A modified sectoral level analysis from Pakistan. *Energy Policy*, 149, 112087. <https://doi.org/10.1016/j.enpol.2020.112087>
- Abuoliem, N., Kalyebara, B., & Al-Afeef, M. A. M. (2024). Dynamic relationship among carbon dioxide emissions, energy consumption and economic growth. *Uncertain Supply Chain Management*, 12(2), 1015–1024. <https://doi.org/10.5267/j.uscm.2023.12.007>
- Afaq, R., Zeeshan, Z., Zaman, Dr. S., Rahman, M. U., & Shoaib, M. (2025). Decoding the Link between Renewable Energy and CO2 Emissions: A VECM Analysis of Growth, Energy Consumption, and Population Influences. *Social Science Review Archives*, 3(2), 914–928. <https://doi.org/10.70670/sra.v3i2.682>
- Alakbarov, N., Gündüz, M., & Şaşmaz, M. Ü. (2025). Exploring the link between economic growth, energy consumption, and environmental pollution in G20. *Natural Resources Forum*, 49(2), 1445–1461. <https://doi.org/10.1111/1477-8947.12440>
- Alghamdi, F. M., Kamel, A. R., SidAhmed Mustafa, M., Bahloul, M. M., Alsolmi, M. M., & Abonazel, M. R. (2024). A statistical study for the impact of REMS and nuclear energy on carbon dioxide emissions reductions in G20 countries. *Journal of Radiation Research and Applied Sciences*, 17(3), 100993. <https://doi.org/10.1016/j.jrras.2024.100993>
- Alifah, S., & Pujiati, A. (2025). *Analisis Pengaruh GDP Per Kapita, Financial Development, Energy Use, dan Populasi Usia Produktif Terhadap Emisi CO2 di Indonesia*. 6(6).
- Almeida, D., Carvalho, L., Ferreira, P., Dionisio, A., & Haq, I. U. (2024). *Global Dynamics of Environmental Kuznets Curve: A Cross-Correlation Analysis of Income and CO2 Emissions*. <https://www.mdpi.com/2071-1050/16/20/9089>
- Alola, A. A., & Ozturk, I. (2021). Mirroring risk to investment within the EKC hypothesis in the United States. *Journal of Environmental Management*, 293, 112890. <https://doi.org/10.1016/j.jenvman.2021.112890>

- Andrade, C. (2021). A Student's Guide to the Classification and Operationalization of Variables in the Conceptualization and Design of a Clinical Study: Part 1. *Indian Journal of Psychological Medicine*, 43(2), 177–179. <https://doi.org/10.1177/0253717621994334>
- Andriani, D., Maritasari, D. B., Laela, I., & Husnadia, S. (2025). Pemilihan Teknik Sampling yang Tepat Dalam Penelitian Kualitatif: Literature Review. *Indo-MathEdu Intellectuals Journal*, 6(4), 6238–6247. <https://doi.org/10.54373/imeij.v6i4.3783>
- Anwar, M. A., Zhang, Q., Asmi, F., Hussain, N., Plantinga, A., Zafar, M. W., & Sinha, A. (2022). Global perspectives on environmental kuznets curve: A bibliometric review. *Gondwana Research*, 103, 135–145. <https://doi.org/10.1016/j.gr.2021.11.010>
- ASEAN Secretariat. (2021). *ASEAN State of Climate Change Report*. ASEAN. https://asean.org/wp-content/uploads/2021/10/ASCCR-e-publication-Correction_8-June.pdf
- Ashari, N. R. (2024). *Unraveling The Nexus Between Macroeconomic Factors and Carbon Emissions in Developing Countries: A Vecm Analysis Models*.
- Basuki, A. T. (2025). Economic Development and Fiscal Policy in CO2 Emission Mitigation: A Dynamic Panel Study in Indonesia Before Covid 19. *Neo Journal of Economy and Social Humanities*, 4(1), 23–37. <https://doi.org/10.56403/nejesh.v4i1.253>
- Cahyaning Pratiwi, A., Kusuma Wardhana, A., & Rusgianto, S. (2022). Application of Vector Error Correction Model on Macroeconomic Variables toward Changes in the Composite Stock Price Index. *Daengku: Journal of Humanities and Social Sciences Innovation*, 2(2), 219–229. <https://doi.org/10.35877/454RI.daengku883>
- Chen, N., & Usman, M. (2025). Energy Use, Energy Depletion, and Environmental Degradation: Exploitation of Natural Resources. *Natural Resources Forum*, 49(4), 3984–3995. <https://doi.org/10.1111/1477-8947.12591>
- Clarke, L., Wei, Y.-M., De La Vega Navarro, A., Garg, A., Hahmann, A. N., Khennas, S., Lima de Azevedo, I. M., Löschel, A., Singh, A. K., Steg, L., Strbac, G., & Wada, K. (2022). Energy Systems. In P. R. Shukla, J. Skea, R.

- Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, & J. Malley (Eds.), *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 613–746). Cambridge University Press. <https://doi.org/10.1017/9781009157926.008>
- Derouez, F., & Ifa, A. (2025). Assessing the Sustainability of Southeast Asia's Energy Transition: A Comparative Analysis. *Energies*, 18(2), 287. <https://doi.org/10.3390/en18020287>
- Destriansyah, Moh. W., & Sirodj, D. A. N. (2022). *Analisis Hubungan Harga Saham Bank Central Asia, Inflasi, Kurs (IDR/USD) dan BI Rate dengan Metode Vector Error Correction Model (VECM)*. <https://doi.org/10.29313/BCSS.V2I2.4057>
- Dewi, A. R., Wijaya, A. R., Ghanimi, M., & Ramadhani, T. V. A. (2026). Multivariate Time Series Modeling Using Vector Autoregression For Rice Price Prediction In Indonesia. *BAREKENG: Jurnal Ilmu Matematika Dan Terapan*, 20(3), 2195–2212. <https://doi.org/10.30598/barekengvol20iss3pp2195-2212>
- Dogan, E., & Inglesi-Lotz, R. (2020). The impact of economic structure to the environmental Kuznets curve (EKC) hypothesis: Evidence from European countries. *Environmental Science and Pollution Research*, 27(11), 12717–12724. <https://doi.org/10.1007/s11356-020-07878-2>
- Egi Destiarsono, M., Bastomi Fahri Zusak, M., & Kafabih, A. (2025). Addressing CO2 emissions in Indonesia: Potential role of environmental policy, renewable energy, and economic growth. *IOP Conference Series: Earth and Environmental Science*, 1489(1), 012060. <https://doi.org/10.1088/1755-1315/1489/1/012060>
- Fahria, I., Dalimunthe, D. Y., Amelia, R., Sulistiana, I., & Prayanti, B. D. A. (2023). Prediksi Spot Price Komoditas Emas Berjangka dengan Pendekatan Vector Error Correction Model. *Jambura Journal of Mathematics*, 5(2), 339–350. <https://doi.org/10.34312/jjom.v5i2.18737>

- Faiza Gulshan, Bushra Zahoor, Asif Iqbal, & Tehmina Ejaz. (2025). Comparison of VECM and GMDH-Neural Network Algorithm approaches to estimating FDI inflows in Pakistan. *Social Science Review Archives*, 3(3), 1125–1143. <https://doi.org/10.70670/sra.v3i3.945>
- Fattah, A. M., Aminata, J., Susilowati, I., & Pujiyono, A. (2021). Causality Analysis: Economic Growth, Economic Openness, Energy Consumption, and Carbon Dioxide Emission Indonesia. *Media Ekonomi Dan Manajemen*, 36(2), 124–135. <https://doi.org/10.24856/mem.v36i2.2029>
- Feng, G., Xie, H., Meng, Q., Wu, F., & Li, G. (2022). Advanced Coal, Petroleum, and Natural Gas Exploration Technology. *Energies*, 15(23), 8976. <https://doi.org/10.3390/en15238976>
- Filonchyk, M., Peterson, M. P., Zhang, L., Hurynovich, V., & He, Y. (2024). Greenhouse gases emissions and global climate change: Examining the influence of CO₂, CH₄, and N₂O. *Science of The Total Environment*, 935, 173359. <https://doi.org/10.1016/j.scitotenv.2024.173359>
- Finger, R., & Möhring, N. (2022). The adoption of pesticide-free wheat production and farmers' perceptions of its environmental and health effects. *Ecological Economics*, 198, 107463. <https://doi.org/10.1016/j.ecolecon.2022.107463>
- Gabriel, L. F., & de Santana Ribeiro, L. C. (2019). Economic growth and manufacturing: An analysis using Panel VAR and intersectoral linkages. *Structural Change and Economic Dynamics*, 49, 43–61. <https://doi.org/10.1016/j.strueco.2019.03.008>
- Ghazouani, T., & Maktouf, S. (2024). Impact of natural resources, trade openness, and economic growth on CO₂ emissions in oil-exporting countries: A panel autoregressive distributed lag analysis. *Natural Resources Forum*, 48(1), 211–231. <https://doi.org/10.1111/1477-8947.12318>
- Gillioz, C., & Zufferey, S. (2020, December 11). *Building a Valid and Reliable Experiment—Introduction to Experimental Linguistics—Wiley Online Library*. <https://doi.org/https://doi.org/10.1002/9781119801719.ch2>
- Goldman, S., Nenovsky, N., & Zhang, S. (2023). CO₂, GDP and Openness: A Vector Error Correction Model Approach for the Eurozone. *Bulgarian*

- Journal of International Economics and Politics*, 3(1), 3–19.
<https://doi.org/10.37075/BJIEP.2023.1.01>
- Grossman, G. M., & Krueger, A. B. (1991). *Environmental Impacts of a North American Free Trade Agreement* (Working Paper No. 3914). National Bureau of Economic Research. <https://doi.org/10.3386/w3914>
- Guo, Z. (2023). Research on the Augmented Dickey-Fuller Test for Predicting Stock Prices and Returns. *Advances in Economics, Management and Political Sciences*, 44(1), 101–106. <https://doi.org/10.54254/2754-1169/44/20232198>
- Gyamerah, S. A., & Gil-Alana, L. A. (2023). A multivariate causality analysis of CO2 emission, electricity consumption, and economic growth: Evidence from Western and Central Africa. *Heliyon*, 9(1), e12858. <https://doi.org/10.1016/j.heliyon.2023.e12858>
- Habibzadeh, F. (2024). Data Distribution: Normal or Abnormal? *Journal of Korean Medical Science*, 39(3), e35. <https://doi.org/10.3346/jkms.2024.39.e35>
- Hartono, D., Yusuf, A. A., Hastuti, S. H., Saputri, N. K., & Syaifudin, N. (2021). Effect of COVID-19 on energy consumption and carbon dioxide emissions in Indonesia. *Sustainable Production and Consumption*, 28, 391–404. <https://doi.org/10.1016/j.spc.2021.06.003>
- Haxhimusa, A., & Liebensteiner, M. (2021). Effects of electricity demand reductions under a carbon pricing regime on emissions: Lessons from COVID-19. *Energy Policy*, 156, 112392. <https://doi.org/10.1016/j.enpol.2021.112392>
- Hidayat, A. N. (2024). Public Economy Analysis in Electricity-based Transportation in Jakarta: Dilemmas and Costs. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v9i20.16479>
- Hotelling, H. (1931). The Economics of Exhaustible Resources. *Journal of Political Economy*, 39(2), 137–175.
- Hunjra, A. I., Bouri, E., Azam, M., Azam, R. I., & Dai, J. (2024). Economic growth and environmental sustainability in developing economies. *Research in International Business and Finance*, 70, 102341. <https://doi.org/10.1016/j.ribaf.2024.102341>

- Ichsan, Teniro, A., Ikramuddin, Hasan, A., Marzuki, Syamni, G., & Ansari, R. (2024). Examining the drivers of CO₂ Emission: Evidence from Indonesia. *IOP Conference Series: Earth and Environmental Science*, 1302(1), 012070. <https://doi.org/10.1088/1755-1315/1302/1/012070>
- Idroes, G. M., Hardi, I., Rahman, Md. H., Afjal, M., Noviandy, T. R., & Idroes, R. (2024). *The dynamic impact of non-renewable and renewable energy on carbon dioxide emissions and ecological footprint in Indonesia | Carbon Research*. <https://link.springer.com/article/10.1007/s44246-024-00117-0>
- IEA. (2022). *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*. <https://www.iea.org/reports/an-energy-sector-roadmap-to-net-zero-emissions-in-indonesia/executive-summary?>
- IEA. (2023). *Indonesia: Emissions (country profile)*. IEA. <https://www.iea.org/countries/indonesia/emissions>
- IEA. (2023). *Indonesia—Countries & Regions Emissions*. IEA. <https://www.iea.org/countries/indonesia/emissions>
- IEA. (2024). *Southeast Asia Energy Outlook 2024*. IEA. <https://www.iea.org/reports/southeast-asia-energy-outlook-2024/executive-summary>
- IESR. (2024). *Indonesia Energy Transition Outlook 2024*. IESR. <https://iesr.or.id/wp-content/uploads/2024/03/Indonesia-Energy-Transition-Outlook-2024-1.pdf>
- Internasional Energy Agency. (2022). *Executive summary – An Energy Sector Roadmap to Net Zero Emissions in Indonesia – Analysis*. IEA. <https://www.iea.org/reports/an-energy-sector-roadmap-to-net-zero-emissions-in-indonesia/executive-summary>
- IPCC. (2023). *Climate Change 2023: Synthesis Report*. IPCC. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf
- Islam, F., Nukala, S. K., Shrestha, P., Badgery-Parker, T., & Foo, F. (2025). Air pollution and cardiovascular disease: A systematic review of the effects of air pollution, including bushfire smoke, on cardiovascular disease.

- American Heart Journal Plus: Cardiology Research and Practice*, 54, 100546. <https://doi.org/10.1016/j.ahjo.2025.100546>
- Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control*, 12(2), 231–254. [https://doi.org/10.1016/0165-1889\(88\)90041-3](https://doi.org/10.1016/0165-1889(88)90041-3)
- Kartal, M. T., Magazzino, C., & Pata, U. K. (2024). Marginal effect of electricity generation on CO2 emissions: Disaggregated level evidence from China by KRLS method and high-frequency daily data. *Energy Strategy Reviews*, 53, 101382. <https://doi.org/10.1016/j.esr.2024.101382>
- KESDM. (2026, January 28). *Presiden Prabowo Lantik Ketua Harian dan Anggota DEN Periode 2026-2030*. ESDM. <https://www.esdm.go.id/en/media-center/news-archives/presiden-prabowo-lantik-ketua-harian-dan-anggota-den-periode-2026-2030>
- Kraft, J., & Kraft, A. (1978). On the Relationship Between Energy and GNP. *The Journal of Energy and Development*, 3(2), 401–403.
- Kuznets, S. (1955). Economic Growth and Income Inequality. *The American Economic Review*, 45(1), 1–28.
- Li, L., Raza, M. Y., & Cucculelli, M. (2024). Electricity generation and CO2 emissions in China using index decomposition and decoupling approach. *Energy Strategy Reviews*, 51, 101304. <https://doi.org/10.1016/j.esr.2024.101304>
- Loves, L., Usman, M., Warsono, Widiarti, & Russel, E. (2021). Modeling Multivariate Time Series by Vector Error Correction Models (VECM) (Study: PT Kalbe Farma Tbk. and PT Kimia Farma (Persero) Tbk). *Journal of Physics: Conference Series*, 1751(1), 012013. <https://doi.org/10.1088/1742-6596/1751/1/012013>
- Lutvi, N. A., Apriliana, D., Khoirudin, R., Salim, A., & Khasanah, U. (2025). *Analysis of Exchange Rate Decomposition In Indonesia: A Vecm Approach*. 01.
- Mack, R. P. (1953). [Review of *Review of Psychological Analysis of Economic Behavior*, by G. Katona]. *The American Economic Review*, 43(5), 931–933.

- Majdina, N. I., Pratikno, B., & Tripena, A. (2024). Penentuan Ukuran Sampel Menggunakan Rumus Bernoulli dan Slovin: Konsep dan Aplikasinya. *Jurnal Ilmiah Matematika dan Pendidikan Matematika*, 16(1), 73. <https://doi.org/10.20884/1.jmp.2024.16.1.11230>
- Martins, T., Barreto, A. C., Souza, F. M., & Souza, A. M. (2021). Fossil fuels consumption and carbon dioxide emissions in G7 countries: Empirical evidence from ARDL bounds testing approach. *Environmental Pollution*, 291, 118093. <https://doi.org/10.1016/j.envpol.2021.118093>
- Marwa, T., Bashir, A., Atiyatna, D. P., Hamidi, I., Mukhlis, M., & Sukanto, S. (2022). The Link between Economic Growth, Electricity Consumption, and CO2 Emissions: Evidence from Indonesia. *Signifikan: Jurnal Ilmu Ekonomi*, 11(2), 253–272. <https://doi.org/10.15408/sjie.v11i2.26286>
- Massagony, A. & Budiono. (2023). Is the Environmental Kuznets Curve (EKC) hypothesis valid on CO2 emissions in Indonesia? *International Journal of Environmental Studies*, 80(1), 20–31. <https://doi.org/10.1080/00207233.2022.2029097>
- Mmbaga, N. F., & Kulindwa, Y. J. (2025). Exploring the Causal Relationship Between Energy Consumption and Economic Growth: Evidence from Eastern Africa. *New Energy Exploitation and Application*, 4(2), 78–97. <https://doi.org/10.54963/need.v4i2.1260>
- Mulusew, A., & Hong, M. (2024). A dynamic linkage between greenhouse gas (GHG) emissions and agricultural productivity: Evidence from Ethiopia. *Humanities and Social Sciences Communications*, 11(1), 52. <https://doi.org/10.1057/s41599-023-02437-9>
- Murshed, M., Saboori, B., Madaleno, M., Wang, H., & Doğan, B. (2022). Exploring the nexuses between nuclear energy, renewable energy, and carbon dioxide emissions: The role of economic complexity in the G7 countries. *Renewable Energy*, 190, 664–674. <https://doi.org/10.1016/j.renene.2022.03.121>
- Naila, P., Abbas, T., & Abubakar, J. (2024). Pengaruh Ekspor, Investasi, dan Indeks Pembangunan Manusia (IPM) Terhadap Produk Domestik Bruto (PDB) di Indonesia. *Jurnal Ekonomi Regional Unimal*, 6(2), 50. <https://doi.org/10.29103/jeru.v6i2.14586>

- Nanaka, S. O., Essi, I. D., Department of Mathematics, Faculty of Sciences, Rivers State University, Nkpolu-Oroworukwo, Port Harcourt, Nigeria, Nafo, N. M., Department of Mathematics, Faculty of Sciences, Rivers State University, Nkpolu-Oroworukwo, Port Harcourt, Nigeria, Deebom, Z. D., & Department of Mathematics, Faculty of Sciences, Rivers State University, Nkpolu-Oroworukwo, Port Harcourt, Nigeria. (2022). Modeling the Effect of Monetary Policy on Commercial Bank's Lending Operation in Nigeria using Vector Error Correction Model (1991- 2020). *IIARD INTERNATIONAL JOURNAL OF BANKING AND FINANCE RESEARCH*, 8(2), 51–66. <https://doi.org/10.56201/ijbfr.v8.no2.2022.pg51.66>
- Nathaniel, S. P., Alam, Md. S., Murshed, M., Mahmood, H., & Ahmad, P. (2021). The roles of nuclear energy, renewable energy, and economic growth in the abatement of carbon dioxide emissions in the G7 countries. *Environmental Science and Pollution Research*, 28(35), 47957–47972. <https://doi.org/10.1007/s11356-021-13728-6>
- Nguyen, X. P., Hoang, A. T., Ölçer, A. I., & Huynh, T. T. (2025). Record decline in global CO2 emissions prompted by COVID-19 pandemic and its implications on future climate change policies. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 47(1), 4699–4702. <https://doi.org/10.1080/15567036.2021.1879969>
- Øby, E. (2025). Assessing transparency and methodological precision in variable measurement within organizational research: Implications for validity. *Quality & Quantity*, 59(S1), 489–506. <https://doi.org/10.1007/s11135-024-01991-x>
- OECD. (2016, June 9). *The Economic Consequences of Outdoor Air Pollution*. OECD Publishing. OECD. <https://doi.org/10.1787/9789264257474-en>
- Oltulular, S. (2025). Energy Efficiency and Environmental Technologies in Carbon Emissions Reduction Strategies for a Sustainable Future: Estimation Through Simultaneous Equation Systems. *Energies*, 18(14), 3596. <https://doi.org/10.3390/en18143596>

- Oprea, S.-V., Bâra, A., & Georgescu, I. A. (2025). Investments, Economics, Renewables and Population Versus Carbon Emissions in ASEAN and Larger Asian Countries: China, India and Pakistan. *Sustainability*, 17(14), 6628. <https://doi.org/10.3390/su17146628>
- Pachiyappan, D., Ansari, Y., Alam, M. S., Thoudam, P., Alagirisamy, K., & Manigandan, P. (2021). Short and Long-Run Causal Effects of CO2 Emissions, Energy Use, GDP and Population Growth: Evidence from India Using the ARDL and VECM Approaches. *Energies*, 14(24), 8333. <https://doi.org/10.3390/en14248333>
- Pata, U. K., Bulut, U., Balsalobre-Lorente, D., & Chovancová, J. (2025). Does income growth affect renewable energy or carbon emissions first? A Fourier-based analysis for renewable and fossil energies. *Energy Strategy Reviews*, 57, 101615. <https://doi.org/10.1016/j.esr.2024.101615>
- Pigou, A. C. (1920). *The Economics of Welfare*. Internet Archive in 2007 with funding from IVIicrosoft Corporation. <http://www.archive.org/details/economicsofwelfa00pigouft>
- Pratama, D. N., Aida, N., & Murwiati, A. (2025). The Vector Error Correction Model (VECM) in Analyzing the Impact of Economic Growth, Population Growth, and Carbon Emissions in Indonesia. *International Journal of Economics, Management and Accounting (IJEMA)*, 2(8), 731–738. <https://doi.org/10.47353/ijema.v2i8.226>
- Putra, B. R., & Rusgianto, S. (2023). Analysis of Energy Consumption and Carbon Emissions in Indonesia. *Jurnal Ekonomi Pembangunan*, 21(01), 31–45. <https://doi.org/10.22219/jep.v21i01.25337>
- Qayyum, M., Ali, M., Nizamani, M. M., Li, S., Yu, Y., & Jahanger, A. (2021). Nexus between Financial Development, Renewable Energy Consumption, Technological Innovations and CO2 Emissions: The Case of India. *Energies*, 14(15), 4505. <https://doi.org/10.3390/en14154505>
- Rahayuningrum, S. T. (2024). Analysis of the Existence of Environmental Kuznets Curve (EKC) Hypothesis on CO2 Emission, Energy Consumption, and Economic Growth in Indonesia. *Journal of Economics Research and Social Sciences*, 8(1), 38–52. <https://doi.org/10.18196/jerss.v8i1.19310>

- Rao, G. B. (2023). *CO2 Emissions, Economic Growth and Energy Consumption Nexus: The case of India*. In Review. <https://doi.org/10.21203/rs.3.rs-2871711/v1>
- Reuters. (2025). *JETP estimates Indonesia needs \$92 billion by 2050 for decarbonising captive power sector* | Reuters. <https://www.reuters.com/sustainability/climate-energy/jetp-estimates-indonesia-needs-92-billion-by-2050-decarbonising-captive-power-2025-12-18/>
- Ritchie, H., & Roser, M. (2020). CO₂ emissions. *Our World in Data*. <https://ourworldindata.org/co2-emissions>
- Saidi, K., & Omri, A. (2020). Reducing CO₂ emissions in OECD countries: Do renewable and nuclear energy matter? *Progress in Nuclear Energy*, 126, 103425. <https://doi.org/10.1016/j.pnucene.2020.103425>
- Salari, M., Javid, R. J., & Noghanibehambari, H. (2021). The nexus between CO₂ emissions, energy consumption, and economic growth in the U.S. *Economic Analysis and Policy*, 69, 182–194. <https://doi.org/10.1016/j.eap.2020.12.007>
- Şanlı, D., Muratoğlu, Y., Songur, M., & Uğurlu, E. (2023). The asymmetric effect of renewable and non-renewable energy on carbon emissions in OECD: New evidence from non-linear panel ARDL model. *Frontiers in Environmental Science*, 11, 1228296. <https://doi.org/10.3389/fenvs.2023.1228296>
- Sarkodie, S. A., Owusu, P. A., & Leirvik, T. (2020). Global effect of urban sprawl, industrialization, trade and economic development on carbon dioxide emissions. *Environmental Research Letters*, 15(3), 034049. <https://doi.org/10.1088/1748-9326/ab7640>
- Sasana, H., & Septiani, Y. (2020). *Analisis Konsumsi Energi Fosil, Emisi Co₂, Konsumsi Energi Terbarukan Dan Pertumbuhan Ekonomi Terhadap Pengeluaran Kesehatan Indonesia Periode Tahun 2000-2017*.
- Sathyanarayana, S., & Mohanasundaram, T. (2025). Stationarity and Unit Roots in Time Series: Theoretical Insights and Practical Considerations. *IRA-*

- International Journal of Management & Social Sciences* (ISSN 2455-2267), 21(2), 46–78. <https://doi.org/10.21013/jmss.v21.n2.p1>
- Satrianto, A., Ikhsan, A., & Samad, K. A. (2024). Analysis of Renewable Energy, Environment Quality and Energy Consumption on Economic Growth: Evidence from Developing Countries. *International Journal of Energy Economics and Policy*, 14(4), 57–65. <https://doi.org/10.32479/ijeep.15981>
- Setkab. (2026, January 28). Presiden Prabowo Lantik Keanggotaan Dewan Energi Nasional. *Sekretariat Kabinet Republik Indonesia*. <https://setkab.go.id/presiden-prabowo-lantik-keanggotaan-dewan-energi-nasional/>
- Sirohi, J., Hloušková, Z., Bartoňová, K., Malec, K., Maitah, M., & Koželský, R. (2023). The Vertical Price Transmission in Pork Meat Production in the Czech Republic. *Agriculture*, 13(6), 1274. <https://doi.org/10.3390/agriculture13061274>
- Soeder, D. J. (2021). Greenhouse gas sources and mitigation strategies from a geosciences perspective. *Advances in Geo-Energy Research*, 5(3), 274–285. <https://doi.org/10.46690/ager.2021.03.04>
- Šomplák, R., Kropáč, J., Pluskal, J., Pavlas, M., Urbánek, B., & Vítková, P. (2022). A Multi-Commodity Mathematical Modelling Approach—Hazardous Waste Treatment Infrastructure Planning in the Czech Republic. *Sustainability*, 14(6), 3536. <https://doi.org/10.3390/su14063536>
- Sovacool, B. K. (2016). How long will it take? Conceptualizing the temporal dynamics of energy transitions. *Energy Research & Social Science, Energy Transitions in Europe: Emerging Challenges, Innovative Approaches, and Possible Solutions*, 13, 202–215. <https://doi.org/10.1016/j.erss.2015.12.020>
- Sovacool, B. K., Hess, D. J., & Cantoni, R. (2021). Energy transitions from the cradle to the grave: A meta-theoretical framework integrating responsible innovation, social practices, and energy justice. *Energy Research & Social Science*, 75, 102027. <https://doi.org/10.1016/j.erss.2021.102027>
- Stern, D. I., Common, M. S., & Barbier, E. B. (1996). Economic growth and environmental degradation: The environmental Kuznets curve and

- sustainable development. *World Development*, 24(7), 1151–1160.
[https://doi.org/10.1016/0305-750X\(96\)00032-0](https://doi.org/10.1016/0305-750X(96)00032-0)
- Sugiawan, Y., & Managi, S. (2016). The environmental Kuznets curve in Indonesia: Exploring the potential of renewable energy. *Energy Policy*, 98, 187–198.
<https://doi.org/10.1016/j.enpol.2016.08.029>
- Sugiyono, Prof. Dr. (2022). *Metode Penelitian Kuantitatif Kualitatif dan R&D* [Book].
- Suhartoko, Y. B., & Ekaristi, M. G. D. (2023). The Impact of Economic Growth, Foreign Direct Investment, Population, and Energy Consumption on Carbon Dioxide Emissions in Six ASEAN Countries During the Period 2000-2021. *Society*, 11(2), 771–786. <https://doi.org/10.33019/society.v11i2.557>
- Suliyanto, S., Amelia, D., Raya, K. B., & Evelyn, J. (2024). Comparison of Vector Error Correction Model Prediction and Multiresponse Fourier Series, Case Study: Open Unemployment Rate in Indonesia. *JTAM (Jurnal Teori Dan Aplikasi Matematika)*, 8(4), 1109. <https://doi.org/10.31764/jtam.v8i4.24108>
- Suryahadi, A., Hadiwidjaja, G., & Sumarto, S. (2019). Economic growth and poverty reduction in Indonesia before and after the asian financial crisis. *Bulletin of Indonesian Economic Studies*, 48(2), 209–227.
<https://doi.org/10.1080/00074918.2012.694155>
- Tao, H., Mu, H., Li, N., & Wang, P. (2023). Alternative Energy and CO2 Emission in China: Evidence from Bounds Testing and Vector Error Correction Model Approach. *Energies*, 16(8), 3436. <https://doi.org/10.3390/en16083436>
- The Global Economy. (2023). *Carbon dioxide (CO2) emissions in ASEAN*. TheGlobalEconomy.Com.
https://www.theglobaleconomy.com/rankings/Carbon_dioxide_emissions/ASEAN/
- Triani, M., Tambunan, H. B., Dewi, K., & Ediansjah, A. S. (2023). Review on Greenhouse Gases Emission in the Association of Southeast Asian Nations (ASEAN) Countries. *Energies*, 16(9), 3920.
<https://doi.org/10.3390/en16093920>
- UNFCCC. (2022). *Enhanced Nationally Determined Contribution Republic of Indonesia*. United Nations Framework Convention on Climate Change.

- United Nations. (2023). *Goal 7 | Department of Economic and Social Affairs*. The SDGs Report 2024. <https://sdgs.un.org/goals/goal7?>
- United Nations. (2024). *Goal 13 | Department of Economic and Social Affairs*. The SDGs Report 2025. <https://sdgs.un.org/goals/goal13>
- Usman, M., Loves, L., Russel, E., Ansori, M., Warsono, W., Widiarti, W., & Wamiliana, W. (2022). Analysis of Some Energy and Economics Variables by Using VECMX Model in Indonesia. *International Journal of Energy Economics and Policy*, 12(2), 91–102. <https://doi.org/10.32479/ijeep.11897>
- Usman, M., & Radulescu, M. (2022). Examining the role of nuclear and renewable energy in reducing carbon footprint: Does the role of technological innovation really create some difference? *Science of The Total Environment*, 841, 156662. <https://doi.org/10.1016/j.scitotenv.2022.156662>
- Wahyudi, H. (2024). The Relationship between the Renewable Energy and CO2 Emissions to the Indonesian Economy. *International Journal of Energy Economics and Policy*, 14(3), 349–357. <https://doi.org/10.32479/ijeep.15903>
- Wang, Q., Guo, J., Li, R., & Jiang, X. (2023). Exploring the role of nuclear energy in the energy transition: A comparative perspective of the effects of coal, oil, natural gas, renewable energy, and nuclear power on economic growth and carbon emissions. *Environmental Research*, 221, 115290. <https://doi.org/10.1016/j.envres.2023.115290>
- Wang, Q., & Wang, L. (2020). Renewable energy consumption and economic growth in OECD countries: A nonlinear panel data analysis. *Energy*, 207, 118200. <https://doi.org/10.1016/j.energy.2020.118200>
- Wang, X. (2024). Correlation analysis of energy consumption, carbon emissions and economic growth. *Energy Informatics*, 7(1), 45. <https://doi.org/10.1186/s42162-024-00349-9>
- Wardani, T. U., Herianto, H., & Haslindah, H. (2023). Measuring the Level of Fossil Energy Consumption, Economic Development, and International Trade on Co2 Emission Production in Indonesia. *El Barka: Journal of Islamic Economics and Business*, 6(2), 383–409. <https://doi.org/10.21154/elbarka.v6i2.7279>

- Winarno, S., Usman, M., Warsono, Kurniasari, D., & Widiarti. (2021). Application of Vector Error Correction Model (VECM) and Impulse Response Function for Daily Stock Prices. *Journal of Physics: Conference Series*, 1751(1), 012016. <https://doi.org/10.1088/1742-6596/1751/1/012016>
- World Bank. (2025). *Alternative and nuclear energy (% of total energy use)*. World Bank Open Data. <https://data.worldbank.org>
- World Bank. (2025). *Glossary* | *DataBank*. <https://databank.worldbank.org/metadataglossary/world-development-indicators/series/EG.USE.ELEC.KH.PC>
- Xuan, V. N. (2025). Determinants of carbon dioxide emissions in technology revolution 6.0: New insights from Brunei. *Energy Strategy Reviews*, 57, 101633. <https://doi.org/10.1016/j.esr.2024.101633>
- Yafi, A. H., Bagaskara, A., Sisdwinugraha, A. P., Hapsari, A., & Wijaya, F. (2024). Indonesia Energy Transition Outlook (IETO) 2024. *IESR*. <https://iesr.or.id/pustaka/indonesia-energy-transition-outlook-ieto-2024/>
- Yakymchuk, A., & Rataj, M. A. (2025). Economic Analysis of Fossil CO2 Emissions: A European Perspective on Sustainable Development. *Energies*, 18(8), 2106. <https://doi.org/10.3390/en18082106>
- Yang, Y., Xia, S., Huang, P., & Qian, J. (2024). Energy transition: Connotations, mechanisms and effects. *Energy Strategy Reviews*, 52, 101320. <https://doi.org/10.1016/j.esr.2024.101320>
- Yang, Z., Cai, J., Lu, Y., & Zhang, B. (2022). The Impact of Economic Growth, Industrial Transition, and Energy Intensity on Carbon Dioxide Emissions in China. *Sustainability*, 14(9), 4884. <https://doi.org/10.3390/su14094884>