



The Impact of Energy Use on Indonesian Economic Development: A Qualitative Analysis of Stakeholder Views and Attitudes

Tohiroh Tohiroh

STIE Ganesha

Email: tohiroh8@gmail.com

Aep Saefullah

STIE Ganesha

Email: aep@stieganessa.ac.id

Korespondensi Penulis: aep@stieganessa.ac.id

Abstract. *The purpose of this study is to determine the effect of energy consumption on economic growth in Indonesia, as well as to investigate stakeholder perceptions and attitudes regarding energy consumption and its impact on economic growth. The research method employed is a descriptive qualitative approach based on literature, observation, and media studies involving stakeholders including government officials, experts, academics, and the general people. The study's findings indicate that increased domestic energy use can boost economic growth. Increased energy consumption promotes the expansion of home economic industries. Second, stakeholders have diverse perceptions and attitudes regarding energy usage and its impact on economic growth. Some stakeholders think that energy consumption is vital for economic progress, while others claim that excessive energy consumption has a negative impact on environmental and economic sustainability. The importance of collaborating with all stakeholders to promote energy consumption and Indonesian economic growth. The study focuses on stakeholder views of energy usage, which has an impact on economic growth. The study suggests that more research on energy usage should be conducted in order to broaden and fully improve economic growth. This research also assists to offering insights and true pictures of stakeholders regarding the conditions of energy use and economic growth.*

Keywords: *Energy Consumption, Economic Growth, Stakeholder, Sustainable Energy.*

INTRODUCTION

Indonesia's economic development is constant, whereas growth in energy use is dropping. Between 1990 and 2019, fuel oil, gas, and biomass consumption, as well as average years of schooling, had a positive and significant effect, however road infrastructure and life expectancy had little effect on Indonesian economic growth (Purnomo et al., 2023).

The factors that need to be considered include energy reserves, which should be increased by increasing the number of energy sources and developing more infrastructure to support and increase energy supply, and education quality, which should be improved by providing scholarships, increasing educators and physical infrastructure (Riandi et al., 2024) and (Saefullah, 2022).

The contemporary economy is made up of energy conversion flows that steer energy towards the production of products and services (Saefullah, Gustiawan, et al., 2023). A focus on energy yields a range of insights; it generates a new taxonomy of the economy and economic activity, a better understanding of the tasks performed by labour and capital; improves prospects for examining growth as an accelerating engine; and identifies increased energy use as an important source of growth (Alam, 2006).

According to (Primayesa & Putra, 2017) one of the most pressing concerns in the energy sector today is energy efficiency, which is linked to growing energy prices and the need to minimise greenhouse gas emissions. Economic expansion does not boost energy use, and vice versa (Kustina et al., 2022). This suggests that the government can implement conservation and economic growth programmes concurrently. (Dat et al., 2020) stated that economic growth and energy consumption are linked. Energy usage can predict economic growth in Indonesia based on available historical data.

All economic activities require energy, and natural energy sources can be used to the greatest extent possible by the society to promote prosperity and sustainable development (Saefullah, Abas, et al., 2023). Indonesia has enormous renewable and sustainable energy potential, which has yet to be fully realized (Suarna et al., 2022). Based on current data, sustainable energy consumption remains extremely low due to the continued dominance of fossil fuels. For three years, economic growth against population increase has not had a major impact on sustainable energy consumption in Indonesia. However, fossil fuel energy consumption has had a positive and significant impact on sustainable energy consumption (Pasaribu et al., 2023).

Energy is crucial for economic activity. As a natural resource, energy must be used as much as feasible for societal prosperity, and its management must be consistent with the principles of sustainable development (Saefullah, Fadli, et al., 2023). The potential for renewable energy in Indonesia is enormous, but it has not been fully realised. Renewable energy consumption in Indonesia over the period 1990-2018 is still relatively low, and the rise is not very substantial because energy consumption in Indonesia is still dominated by fossil fuel usage (Afriyanti et al., 2020).

Over the last decade, the energy sector has played an increasingly vital role in determining a country's economy (Putrizain et al., 2023). Renewable energy consumption has harmed Indonesia's economic growth. This is because renewable energy generation remains restricted; however, consumption continues to rise. Nonrenewable energy usage boosts Indonesia's economic growth. Despite the government's continued promotion of renewable energy production, dependence on fossil fuels remains high. In general, energy consumption boosts Indonesia's economic growth. When both are combined, they have a positive impact on the national economy (Aswadi et al., 2023). Ecological and biophysical economists, as well as economic historians, believe that the availability of energy inputs is critical to encouraging economic growth in both industrialised and developing countries. However, because it is very

sensitive to structural features or stages of economic growth, the strength of this link varies across countries (Pablo-Romero & Sánchez-Braza, 2015).

Previous research on energy consumption and how it affects energy growth has been extensive, including a study conducted by (Srihardianti et al., 2016) on forecasting energy consumption in Indonesia using the panel data regression method for forecasting Indonesia's energy consumption during 2015-2016. According to the findings, Indonesia's household and transportation energy consumption would rise in 2015 and 2016. Meanwhile, the industrial, commercial, and other sectors will see a dip in 2015, followed by an uptick in 2016.

(Farhani & Rejeb, 2012) investigated the energy consumption, economic development, and CO₂ emissions of fifteen MENA nations. This study's findings show that there is no short-term causal link between GDP and EC or CO₂ emissions and EC. However, in the long run, there is a one-way causal relationship between GDP, CO₂ emissions, and EC. Furthermore, to overcome nation heterogeneity and endogeneity bias in the regressors, the FMOLS and DOLS methods are utilised to evaluate the long-term association between the three components. Furthermore, (Stern, 2011) investigated the impact of energy on economic growth. An examination of his data revealed that energy and GDP are cointegrated, that energy use Granger affects GDP when capital and other production inputs are included in the vector autoregression model.

(Arsita et al., 2021) did a literature assessment on the development of Indonesia's national energy and new and renewable energy policy. The findings revealed that Law No. 30 of 2007 on energy is the foundation for formulating regulations governing the design of new and renewable energy. To maximise the mix of new and renewable energy, the government has built renewable energy power plants, primarily to overcome the electrification ratio problem, support renewable energy regulations, maximise the National Energy Council and other institutions, set specific targets, and maintain bilateral forms of cooperation on the international level.



Source : (<https://jakselkota.bps.go.id>, 2021)

Energy needs must be balanced with energy availability in an appropriate, integrated, and sustainable manner in order to facilitate activity in all energy-using sectors. The balance of energy supply and demand must be examined in order to provide an overview of the many types of energy sources available and required. The energy economy is a primary priority in today's modern day, and all energy stakeholders must address it.

This study is critical for understanding how energy use influences economic growth in Indonesia. In addition, this study investigates how stakeholder perceptions and attitudes towards energy usage affect economic development. This study limits stakeholders' perceptions of how energy usage affects economic growth. As a result, it is envisaged that more research will be performed on the role of energy consumption in promoting economic growth. The research's contribution is to present a real image of stakeholders regarding the status of energy consumption and energy growth.

METHOD

The research employs a descriptive qualitative strategy, which includes techniques for exploring relevant problems, achieving targets and objectives, and determining the scope and stages of research activities. Additionally, flow will be used to obtain research instruments (Sugiyono, 2020).

Researchers want to know how energy usage influences Indonesia's economic growth, as well as stakeholders' perceptions and attitudes towards energy consumption. This investigation was conducted in April 2023. Respondent data are ten stakeholders, consisting of central government officials, observers, business practitioners in the energy sector, academics, and energy user consumers.

Data collection methods include library research, observations, and media studies. The data was analysed to get accurate information (Abdussamad, 2021). The acquired data were rigorously analysed utilising a triangulation scheme, as evidenced by data validity (Gunawan, 2013).

The methods employed in this investigation were as follows:

1. Literature Study

The literature review focused on internationally (Scopus) and nationally (Sinta) accredited books and papers, as well as the stakeholders' websites and social media accounts.

2. Media Study

This study was conducted directly by analysing social media and websites for stakeholder replies and comments. This was done to learn about present conditions, energy consumption limits, and economic growth.

3. Observation

Observations were conducted to gather insights into Indonesia's energy consumption and economic growth by analysing stakeholder behaviour and speech from various media sources.

RESULTS AND DISCUSSION

According to Law No. 30 of 2007, Energy Management is based on the principles of expediency, rationality, equitable efficiency, increased added value, sustainability, community welfare, the preservation of environmental functions, national resilience, and integration by prioritising national capabilities. To achieve this, energy management operations in energy utilisation are carried out by adopting energy management, as specified in Government Regulation No. 70 of 2009 concerning energy conservation (Manajemen Energi, 2023).

(Suharyati et al., 2022) observed that national energy consumption can be seen from three areas, as shown in Table 1. First, final energy consumption per sector in 2021 began to rise following a drop in 2020 because to the Covid-19 epidemic. In 2021, final energy consumption reached 123 million TOE, representing a 1.6% rise due to economic recovery

efforts throughout the year. In terms of usage, the transportation industry had the highest percentage (44.2%). The energy use for transportation rose by about 6.7%. The increase occurred because of the increase in mobility of persons with the level of social limitations and the number of Covid-19 pandemic cases declining. The industrial sector, the second-largest consumer, accounts for around 33.5% of total final energy consumption. The industrial sector's energy consumption declined by 5.8% over the previous year. This suggests that industrial activity hasn't yet rebounded. The household sector is the third largest, accounting for 16.3%.

Second, determine the ultimate energy usage by type. Fuel dominated energy use, accounting for 33 million TOE (26.8%). This was owing to increased community mobilisation and a sustained rise in the number of motor vehicles. Fuel replacement for gasoline and electric vehicles has not been adequately implemented due to the low number of SPBGs and the regulation of electric vehicles, which was just issued in August 2019. The usage of biofuels (biogas oil and biogas) ranked second, accounting for roughly 27 million TOE (22.1%). The government's attempts to promote the use of biofuels through the mandated B30 programme were also successful. Meanwhile, electricity and LPG usage reached 23.6 and 10.2 million TOE, respectively.

Third, the Java-Bali region continues to account for 52.7% of total Indonesian final energy consumption. Sumatra leads with 22 million TOE (18.0%), followed by Kalimantan with 17 million TOE (13.9%), Sulawesi with 12 million TOE (9.9%), and Nusmapa with 7 million TOE (5.5%). This figure is consistent with the distribution of Indonesia's population, with 58% residing in the Java-Balalidan region and 22% in the Sumatra region.

Table 1. National Energy Consumption in 2021

National Energy Consumption in 2021			
Final Energy Consumption per-Sector	Transportation 44,2%	Industry 33,5 %	Household 16,3%
Final Energy Consumption per-Type	BBM (26,8%)	BBN (Biogasoil dan Biogas) (22,1%)	Electricity and LPG 23,6 juta TOE dan 10,2 juta
	Java-Bali (1) 52,7%	Sumatera (2) 22 juta TOE (18,0%)	Kalimantan (3) 17 juta TOE (13,9%)
Final Energy Consumption per-Region	Sulawesi (4) 12 juta TOE (9,9%)	Nusmapa (5) 7 juta TOE (5,5%)	

Researchers investigated the perspectives and attitudes of stakeholders, including Mukhtasor, Professor at the Sepuluh Nopember Institute of Technology (ITS), and discovered that rooftop solar power plants do not make local enterprises lucrative. According to him, referring to Government Regulation No. 14/2015 on the National Industrial growth Master Plan

2015-2035, the energy generating business is one of the six mainstay industries in national industrial growth. The solar cell is a primary donna because it continues to be prioritised at all stages of the 2015-2035 industrial development plan (Pakar Energi Soroti PLTS Atap Tak Bikin Cuan Industri Lokal, 2021). encouraged the government to formulate policies to strengthen the national industry of solar panel producers, and asked the government to cancel the revision of ESDM Ministerial Regulation Number 49/2018 concerning the use of rooftop solar power plant systems by consumers of PT Perusahaan Listrik Negara.

Members of the National Energy Council (DEN), Rinaldy Damili Satya Widya Yudha, have criticised Indonesia as a market for the indigenous solar cell industry. He believed that it should be encouraged to grow independently and be capable of meeting the future need for solar energy. The global trend for the future has resulted in the development of renewable energy markets, one of which is solar energy. Indonesia is quite capable of growing the solar cell sector; the government must push the industry to create solar energy at a low cost. Satya Widya Yudha stated that support from all parties is required for the transition from fossil fuels to renewable energy. He stated that Indonesia has huge potential for new renewable energy sources that has yet to be completely realised. There must be an acceleration in EBT development. The local government must also fully support and consent to the EBT change.

The Director of the Tropical Renewable Energy Center (TREC), Faculty of Engineering, University of Indonesia, Eko Adhi Setiawan, indicated that the public's interest in installing solar panels or rooftop solar power plants is growing. He questioned why there is such a large disparity between supply and demand when local manufacturing capability is barely 200 MW-300 MW/year. Eko stated that more solar panel assembly units are needed in Indonesia to increase production capacity. This plan can be accomplished by collaboration between the solar panel assembly business in Indonesia and large Chinese or Taiwanese manufacturers, given that China now holds 70% of the global device output.

Arman Hakim Nasution, Head of the Center for Business and Industrial Public Policy Studies (PKKPBI) at the Sepuluh November Institute of Technology, noted that energy is still a driver of a country's economic performance, including Indonesia, and that energy plays a significant role in growth since industrial absorption is up to 50% (Pakar Ungkap Peran Energi Bagi Pertumbuhan Ekonomi Indonesia, 2022). Economic expansion is vital since energy consumption in industrial structures totals 50-60%. According to Arman, for the energy supply to remain steady and avoid shortages, there must be a transfer from fossil energy to New Renewable Energy (EBT). He determined that it is required to map sectors that allow switching to EBT in entirety or as a combination of fossil energy consumption and EBT.

Teguh Dartanto, Dean of the Faculty of Economics and Business at the University of Indonesia, expressed his views on gasoline costs, social protection, and energy transition (Dartanto, 2022). Gasoline price increases are inevitable because the state budget's energy subsidy provision cannot cover the difference between the local selling price of gasoline and the cost of supplying fuel, which must be imported from abroad. The 2022 State Budget contains Rp502.4 trillion in energy subsidies and compensation, which includes Rp208.9 trillion in energy subsidies and Rp239.5 trillion in energy compensation. Fuel price increases cause an increase in inflation over the next 3-4 months, which directly reduces the purchasing power of the lower middle class. History has always demonstrated that various opportunities for change are created when gasoline price modifications occur in Indonesia, one of which is the construction of a social security system.

The central government, through Airlangga Hartarto, the Coordinating Minister for Economic Affairs, has expressed confidence that the Indonesian economy will grow by 5.3% by 2023. This situation is fueled by economic indicators that are still rising. Indonesia's economic performance has maintained an increasing trend. For six straight quarters, Indonesia's economy grew by more than five percent. Several favourable economic indicators, such as a consumer confidence index that is above 100, continue to provide significant support for the economy. The external sector's current account surplus and foreign exchange reserves continue to expand, reaching USD 145.2 billion. Bond rates are rising, the rupiah exchange rate and composite stock price index remain strong, and the debt-to-GDP ratio is at a safe level. To attain a growth objective of 5.3 percent in 2023, the administration is modifying the country's export revenues in the short term (Tahun Politik, Airlangga Optimis Ekonomi Indonesia Tumbuh Di Atas Lima Persen, 2023).

According to Airlangga, Deden Mochammad Idhani, Area Manager of Communication, Relations, and Corporate Social Responsibility at Pertamina Patra Niaga Jatimbalinus, expects that energy consumption will rise again in 2023. Following the Covid 19 pandemic, community activities and both large and small industries resumed normal operations. Economic growth can be boosted by collaborating on all areas to meet the challenges of 2023. The government will take strategic initiatives to produce energy that meets the needs of 2023. Pertamina will undoubtedly endeavour to meet energy needs while carrying out its duties and functions. Fuel Prices, Social Protection, and Energy Transition. INDEF experts have indicated that deregulation of environmental rules might be used to increase investment, which is a necessity for economic growth. The market regards environmental

restrictions as one factor that needs to be modified, if not eliminated because they hamper investment creation (INDEF, 2021).

According to a policy brief on fiscal capacity in the face of the dynamics of energy subsidies and compensation (INDEF, 2023), an increase in total energy consumption will lead to an increase in economic growth in the short term, albeit insignificantly, whereas in the long term, total energy consumption causes a decrease in economic growth in Indonesia. Indonesia's economic growth is determined by total energy usage. This demonstrates that an increase in total energy consumption generates an increase in economic growth in the short term, but not significantly, while in the long term, total energy consumption causes a drop in economic growth in Indonesia.

Mohammad Fariz, a Brawijaya University student, verified that energy usage has an impact on Indonesian economic growth (Fariz, 2015). He pointed out that increasing domestic consumption might boost a country's economic growth. A rise in national consumption indirectly boosts domestic economic industry. Public and household consumption expenditures are macroeconomic variables. Public consumption can have an impact on economic growth since increased consumption raises demand for products and services. This increase in demand for goods and services causes the economy to boost its output of products and services. Increased production of goods and services will boost the economy.

In terms of the environment, Walhi's National Executive Director, Zenzi Suhadi, proposed a resolution to become a common agenda, which is the 2023 environmental review, with the following goals: first, improving the legislative system in favour of environmental recovery, defending human rights, and democracy. The second is law enforcement in the environment and natural resources (SDA). Third, the Nusantara Economy is a strategy to rehabilitate the environment, restore people's rights, and reduce inequalities in access to welfare. Fourth, the Archipelago Economic Ecosystem was established. Archipelago Economic Ecosystem. Fifth, the Ecology Academy is theoretically designed to preserve the archipelago's traditions and depth of indigenous knowledge (Status Lingkungan Hidup Indonesia 2022, 2023). According to Zenzi, the Sustainability Development Goals (SDGs) currently being promoted by the government cannot be expected to be the way of the Indonesian economy and cannot answer the country's two major challenges.

Zainal Arifin, a lecturer in the Graduate Study Programme at PLN Institute of Technology and a board member of the Indonesia Strategic Management Society, believes that energy access is one of Indonesia's SDG (Sustainable Development Goal) indicators. In Indonesia, there are two schools of thinking when it comes to energy development: inexpensive

and clean. The first prioritises an economic approach to energy infrastructure development in order to keep costs low, promote social fairness, and strengthen national industry competitiveness. The second is concerned with sustainability and takes into account the carrying capacity of the ecosystem (Arifin, 2022).

CONCLUSION

The foregoing research suggests that boosting domestic energy use can boost economic growth. Increased energy consumption promotes the expansion of domestic economic activity. Indonesia's economy rose by 5.3 percent through 2023, with economic indicators continuing to rise. Stakeholders have varying perspectives on energy usage for economic development. Stakeholders offer favourable feedback, critiques, and recommendations for economic improvements in terms of energy use. All stakeholders must work together to foster increased energy consumption and Indonesian economic growth. This study focuses on stakeholders' perceptions of energy usage, which influences economic growth. As a result, it is envisaged that more research will be undertaken on energy use in order to boost economic growth. This study contributes to presenting stakeholders' perspectives and a realistic picture of the state of energy use and economic growth.

BIBLIOGRAPHY

- Abdussamad, Z. (2021). *Metode Penelitian Kualitatif* (P. Rapanna (Ed.); 1st ed.). Syakir Media Press.
[https://books.google.co.id/books?hl=en&lr=&id=JtKREAAAQBAJ&oi=fnd&pg=PR5&dq=metode+penelitian+kualitatif&ots=vCJsCTZ2S4&sig=MR8AtZOoQ9AMsYwIjn2_BgcCQ-E&redir_esc=y#v=onepage&q=metode penelitian kualitatif&f=false](https://books.google.co.id/books?hl=en&lr=&id=JtKREAAAQBAJ&oi=fnd&pg=PR5&dq=metode+penelitian+kualitatif&ots=vCJsCTZ2S4&sig=MR8AtZOoQ9AMsYwIjn2_BgcCQ-E&redir_esc=y#v=onepage&q=metode%20penelitian%20kualitatif&f=false)
- Afriyanti, Y., Sasana, H., & Jalunggono, G. (2020). Analisis Faktor-faktor yang Mempengaruhi Konsumsi Energi Terbarukan di Indonesia. *Dinamic*, 2(3), 865–884.
<https://doi.org/10.31002/DINAMIC.V2I3.1428>
- Alam, M. S. (2006). *Economic Growth with Energy*.
- Arifin, Z. (2022). Jalan Terjal Transisi Energi.
<https://www.kompas.id/baca/opini/2022/09/28/jalan-terjal-transisi-energi>
- Arsita, S. A., Saputro, G. E., & Susanto, S. (2021). Perkembangan Kebijakan Energi Nasional dan Energi Baru Terbarukan Indonesia. *Jurnal Syntax Transformation*, 2(12), 1779–1788. <https://doi.org/10.46799/JST.V2I12.473>
- Aswadi, K., Jamal, A., Syahnur, S., & Nasir, M. (2023). Renewable and Non-renewable Energy Consumption in Indonesia: Does it Matter for Economic Growth? *International Journal of Energy Economics and Policy*, 13(2), 107–116. <https://doi.org/10.32479/ijeep.13900>

- Dartanto, T. (2022). Harga BBM, Perlindungan Sosial, dan Transisi Energi. <https://mediaindonesia.com/kolom-pakar/520045/harga-bbm-perlindungan-sosial-dan-transisi-energi>
- Dat, N. D., Hoang, N., Huyen, M. T., Huy, D. T. N., & Lan, L. M. (2020). Energy Consumption and Economic Growth in Indonesia. *International Journal of Energy Economics and Policy*, 10(5), 601–607. <https://doi.org/10.32479/ijeep.10243>
- Farhani, S., & Rejeb, J.-E. Ben. (2012). Energy Consumption, Economic Growth and CO2 Emissions: Evidence from Panel Data for MENA Region.
- Fariz, M. (2015). Pengaruh Konsumsi Energi Terhadap Pertumbuhan Ekonomi Di Indonesia Periode 1980-2012.
- Gunawan, I. (2013). Metode Penelitian Kualitatif Teori Dan Praktik (Suryani (Ed.); 1st ed.). Bumi Aksara. https://books.google.co.id/books?hl=en&lr=&id=AqSAEAAAQBAJ&oi=fnd&pg=PP1&dq=metode+penelitian+kualitatif&ots=m10ouo6RrQ&sig=SET9mX9u-7rA0RXpHxSQ4GDIL0E&redir_esc=y#v=onepage&q=metodepenelitian-kualitatif&f=false <https://jakselkota.bps.go.id>. (2021, November 5). Pertumbuhan Ekonomi Indonesia Triwulan III tahun 2021. <https://jakselkota.bps.go.id>. <https://jakselkota.bps.go.id/backend/images/PERTUMBUHAN-EKONOMI-INDONESIA-TRIWULAN-III-2021-ind.jpg>
- INDEF. (2021). Keluar dari Ekonomi Ekstraktif, Menuju Hijau dan Konstruktif. <https://indef.or.id>. <https://indef.or.id/publikasi/keluar-dari-ekonomi-ekstraktif-menuju-hijau-dan-konstruktif/>
- INDEF. (2023). Kapasitas Fiskal dalam Menghadapi Dinamika Subsidi dan Kompensasi Energi. <https://indef.or.id/>. <https://indef.or.id/publikasi/kapasitas-fiskal-dalam-menghadapi-dinamika-subsidi-dan-kompensasi-energi/>
- Kustina, K. T., Nurhayati, Pratiwii, E., Hertati, L., Qodari, A., Nurhayati, A., Jaya, A., Saefullah, A., Marthalia, D., & Munim, A. (2022). Sistem Informasi Manajemen (1st ed.). Penerbit Yayasan Cendekia Mulia Mandiri. <https://isbn.perpusnas.go.id/Account/SearchBuku?searchTxt=9786238823451&searchCat=ISBN>
- Manajemen Energi. (2023). https://simebtke.esdm.go.id/sinergi/program_konservasi_energi/detail/4/manajemen-energi
- Pablo-Romero, M. del P., & Sánchez-Braza, A. (2015). Productive Energy Use and Economic Growth: Energy, Physical and Human Capital Relationships. *Energy Economics*, 49, 420–429. <https://doi.org/10.1016/J.ENERCO.2015.03.010>
- Pakar Energi Soroti PLTS Atap Tak Bikin Cuan Industri Lokal. (2021). <https://www.cnnindonesia.com/>. <https://www.cnnindonesia.com/ekonomi/20210824192233-90-684811/pakar-energi-soroti-plts-atap-tak-bikin-cuan-industri-lokal>
- Pakar Ungkap Peran Energi Bagi Pertumbuhan Ekonomi Indonesia. (2022). *Republika Online*. <https://ekonomi.republika.co.id/berita/rhsjs349/pakar-ungkap-peran-energi-bagi-pertumbuhan-ekonomi-indonesia>
- Pasaribu, F. I., Cahyadi, C. I., Mujiono, R., & Suwarno, S. (2023). Analysis of the Effect of Economic, Population, and Energy Growth, as well as the Influence on Sustainable

- Energy Development in Indonesia. *International Journal of Energy Economics and Policy*, 13(1), 510–517. <https://doi.org/10.32479/ijeep.13859>
- Primayesa, E., & Putra, F. (2017). Energy Consumption and Economic Growth in Indonesia: Co-Integration and Causality Analysis. *Journal of Computational and Theoretical Nanoscience*, 23(8), 7127–7130. <https://doi.org/10.1166/asl.2017.9307>
- Purnomo, S. D., Wani, N., Suharno, S., Arintoko, A., Sambodo, H., & Badriah, L. S. (2023). The Effect of Energy Consumption and Renewable Energy on Economic Growth in Indonesia. *International Journal of Energy Economics and Policy*, 13(1), 22–30. <https://doi.org/10.32479/ijeep.13684>
- Putrizain, S. S., Saefullah, A., Muriyani, E., Agustina, A., Muksin, M., Mansur, M., & Rahmi, C. (2023). Pengaruh Jumlah Penduduk Dan Pengangguran Terhadap Kemiskinan Di Provinsi Banten. *Amal: Jurnal Ekonomi Syariah*, 5(1). <https://jurnal.iainambon.ac.id/index.php/amal/index>
- Riandi, A., Saefullah, A., & Arza, Z. (2024). Dampak Kenaikan Harga BBM Terhadap Masyarakat Kelas Bawah Di Kecamatan Rumpin Setelah Pandemi COVID 19. *MONETER Jurnal Ekonomi Dan Keuangan*, 2(2), 09–19. <https://doi.org/10.61132/moneter.v2i2.424>
- Saefullah, A. (2022). Analisa Tingkat Kepuasan Pelanggan Terhadap Kualitas Pelayanan Pada Toko Online Shop XYZ. *Economic and Business Management International Journal (EABMIJ)*, 4(3), 278–285. <https://doi.org/10.556442/eabmij.v4i03.221>
- Saefullah, A., Abas, F., & Pardian, R. (2023). Analyzing The Performance Of Cooperative Services At Padaidi Jaya To Increase Member Welfare. *FIRM Journal Management Studies*, 8(2), 236–249. <https://doi.org/10.33021/firm.v8i2.4573>
- Saefullah, A., Fadli, A., & Fariha, H. (2023). Local wisdom-based tourism and creative economy development strategies in Cisantana Village. *Jurnal Pariwisata Pesona*, 8(2), 251–260. <https://doi.org/10.26905/jpp.v8i2.11357>
- Saefullah, A., Gustiawan, W., Kuraesin, A. D., Rahmawati, Nurasih, & Moeljono. (2023). HUMAN RESOURCE MANAGEMENT FUNCTIONS IN BUSINESS SUSTAINABILITY: (Frozen Food Business Case Study). *Upajiwa Dewantara : Jurnal Ekonomi, Bisnis Dan Manajemen Daulat Rakyat*, 7(2), 90–100. <https://jurnal.ustjogja.ac.id/index.php/upajiwa/article/view/15980>
- Srihardianti, M., Mustafid, M., & Prahutama, A. (2016). Metode Regresi Data Panel Untuk Peramalan Konsumsi Energi Di Indonesia. *Jurnal Gaussian*, 5(3), 475–485. <https://doi.org/10.14710/J.GAUSS.5.3.475-485>
- Status Lingkungan Hidup Indonesia 2022. (2023). Kementerian Lingkungan Hidup Dan Kehutanan RI.
- Stern, D. I. (2011). The Role of Energy in Economic Growth. *Annals of the New York Academy of Sciences*, 1219(1), 26–51. <https://doi.org/10.1111/j.1749-6632.2010.05921.x>
- Suarna, I. F., Sesario, R., Khasanah, Juhara, S., Munim, A., Zaena, R. R., Saefullah, A., Setiadi, B., Sutangsa, & Kamaruddin, M. J. (2022). *Manajemen Logistik (1st ed.)*. Penerbit Yayasan Cendekia Mulia Mandiri. <https://isbn.perpusnas.go.id/Account/SearchBuku?searchTxt=978-623-90016-3-6&searchCat=ISBN>

- Sugiyono. (2020). Metode Penelitian Kualitatif; Untuk Penelitian Yang Bersifat Eksploratif, Enterpretif, Interaktif dan Konstruktif (S. Y. Suryandari (Ed.); 3rd ed.). CV Alfabeta. www.cvalfabeta.com
- Suharyati, Pratiwi, N. I., Pambudi, S. H., Wibowo, J. L., Arifin, F. D., Sauqi, A., Damanik, J. T., Pangaribuan, D. B. T., & Kristanto, N. (2022). Outlook Energi Indonesia 2022. Biro Fasilitasi Kebijakan Energi Dan Persidangan Sekretariat Jenderal Dewan Energi Nasional. https://den.go.id/index.php/publikasi/documentread?doc=Buku_Energi_Outlook_2022_Versi_Bhs_Indonesia.pdf
- Tahun Politik, Airlangga Optimis Ekonomi Indonesia Tumbuh di Atas Lima Persen. (2023). Republika Online. <https://ekonomi.republika.co.id/berita/ru6vaf502/tahun-politik-airlangga-optimis-ekonomi-indonesia-tumbuh-di-atas-lima-persen>