IndoPublisher - Journal of Business Analytics and Digital Economy (JBADE)
Vol. 01, No. 01, April 2026, pp. 1~ 7
https://journal.indopublisher.com/index.php/jbade

Renewable Energy Consumption, Electrification, and Structural Transformation in Economic Development: A Systematic Literature Review

Feilisia Angelina[1], Ramoti Stevan Carlos Pakpahan[2], Muhammad Rayhan Fathurrahman[3]
[1]Department of Development Economics, Faculty of Economy and Business, Lambung Mangkurat University, Banjarmasin, Indonesia
[2]Department of Accounting, Faculty of Economy and Business, Lambung Mangkurat University, Banjarmasin, Indonesia
[3]Department of Accounting, Faculty of Economy and Business, Lambung Mangkurat University, Banjarmasin, Indonesia

Article Info

Article history:

Received May, 01, 2026
Revised April,07, 2026
Accepted April 28, 2026

Keywords:

Renewable energy
Biomass
Electrification
Economic growth
Structural transformation
Regional economy

ABSTRACT

This study synthesizes the literature on renewable energy consumption, electrification, structural transformation, and economic development based on metadata from 44 articles and academic works. Using a metadata-based systematic literature review approach, the articles are classified into five clusters: the energy-growth nexus, energy transition and energy justice, electrification and development, growth and structural transformation, and the Indonesia/Kalimantan context concerning biomass, trade, and sectoral development. The findings indicate that the relationship between energy and growth is not uniform, but depends on the type of energy, the quality of electricity supply, energy costs, institutional capacity, sectoral economic structure, and the ability of regions to connect energy resources with productive value chains. Electrification contributes to welfare, employment, productivity, and industrialization when electricity access is accompanied by reliability and productive utilization. This review emphasizes the need to integrate macro-level energy-growth analysis, micro-level evidence on electrification, energy justice perspectives, structural transformation theory, and regional economic context to explain low-carbon development more comprehensively.

Corresponding Author:

Ramoti Stevan Carlos Pakpahan
Department of Accounting, Lambung Mangkurat University
Address: Banjarmasin, Indonesia
Email: stevanpakpahan@gmail.com

1. INTRODUCTION

Energy is a fundamental input in economic development because it supports production activities, mobility, industrialization, and improvements in household welfare. Over the last two decades, academic debate has evolved from the simple question of whether energy consumption drives economic growth into a more complex analysis of energy types, supply quality, costs, emissions, and the institutions governing energy transition [1]-[10]. The energy-growth nexus literature shows that the relationship between energy consumption and economic growth is not universal, because the direction of causality and the magnitude of effects vary across countries, periods, estimation methods, and economic structures.

At the same time, the energy transition agenda in developing countries increasingly requires a balance among economic growth, energy security, social justice, and emission reduction. Studies on Vietnam and Asia show that the successful development of solar energy, wind energy, and coal phase-out is determined not only by technical potential, but also by policy design, financing, institutional capacity, and cross-sectoral coordination [11]-[14]. The energy justice perspective extends this discussion by asking who receives the benefits, who bears the costs, and which groups are often marginalized in the transition process [15], [16].

https://doi.org/xx.xxxx/jbade.v1.i1.xxxx

At the micro and meso levels, electrification functions as a development instrument that can improve household welfare, employment opportunities, service quality, firm productivity, and industrialization processes. However, empirical literature shows that electricity access alone is not always sufficient. The developmental impact of electrification depends strongly on service quality, supply reliability, affordability, and the ability of households and firms to use electricity productively [17]-[24]. Electrification therefore should not be understood merely as the expansion of power grids, but as a process that connects energy with economic and social activities.

The perspectives of economic growth and structural transformation provide the theoretical foundation for understanding why energy matters for development. Growth theory emphasizes factor accumulation, productivity, institutions, and cross-country income differences [33]-[38], whereas the structural transformation literature emphasizes the movement of labor and resources from low-productivity sectors toward higher value-added activities [25]-[32], [39], [40]. Within this framework, energy and electricity can be positioned as enabling infrastructure that supports industrialization, economic diversification, and long-term productivity growth.

To strengthen the contextual relevance for Indonesia, particularly Kalimantan, this review also incorporates four additional articles by P. Y. Usaid and colleagues. The article on a biomass energy system based on palm oil waste broadens the renewable energy discussion from the perspectives of business models and value chains [41]. Meanwhile, studies on exports, the trade sector, regional agricultural expenditure, and village funds provide empirical context regarding regional economic performance, sectoral structure, and poverty reduction in Kalimantan [42]-[44].

Although the available literature is relatively extensive, these studies often develop along separate trajectories: some focus on the macro relationship between energy and growth, others on energy transition policy, others on the impacts of electrification, and others on structural transformation. This article therefore aims to synthesize the literature systematically and develop an integrative framework linking renewable energy, electrification, structural transformation, and economic development.

2. METHOD

This study applies a metadata-based systematic literature review approach. The review corpus consists of 44 articles and academic works, comprising the initial 40 articles in the metadata file and four additional works by P. Y. Usaid and colleagues that are relevant to biomass, regional economic performance, trade, and agricultural development. The reviewed literature includes both classic and contemporary publications from 1954 to 2026, enabling a long-term mapping of the relationships among energy, electrification, structural transformation, agricultural development, trade, and economic growth.

The inclusion criteria in this review are: (1) academic works that discuss the relationship among energy, electrification, economic growth, development, or structural transformation; (2) empirical articles, conceptual articles, handbook chapters, or working papers that are relevant as theoretical foundations; and (3) works with minimum bibliographic metadata, including author, year, title, publication source, and DOI where available. Articles or works were excluded when they did not have substantive relevance to energy, electrification, economic development, or structural transformation.

The extraction stage was conducted by reading the metadata on title, year, journal or publication source, and substantive focus of each article. Each article was then coded into five main clusters: (1) the renewable and non-renewable energy-growth nexus; (2) energy transition, renewable energy policy, and energy justice; (3) electrification, welfare, employment, and productivity; (4) economic growth, agriculture, productivity, trade, institutions, and structural transformation; and (5) the Indonesia/Kalimantan context, covering palm oil biomass, regional economic performance, the trade sector, regional agricultural expenditure, village funds, and poverty.

This approach has limitations. First, the review is metadata-based and therefore does not replace a more detailed full-text assessment of each article. Second, the review corpus is a curated list and cannot be claimed to be an exhaustive representation of the entire global literature. Nevertheless, this approach is useful for mapping conceptual structures, identifying research clusters, and formulating a more targeted future research agenda.

3. RESULTS AND DISCUSSION

Based on the metadata mapping, the literature can be grouped into five broad and mutually complementary clusters. The first cluster positions energy as a macro variable in economic growth models. The second views energy as an arena of policy, transition, and social justice. The third discusses electrification as a micro- and meso-level development mechanism. The fourth connects energy with growth, agriculture, trade, productivity, and structural transformation. The fifth strengthens the Indonesia/Kalimantan context through studies of palm oil biomass, exports, the trade sector, and regional agricultural expenditure [41]-[44].

Table 1. Thematic mapping of the literature based on article metadata

Literature cluster	Articles	Main focus	Main synthesis
Energy-growth nexus	[1]-[10]	Renewable/non-renewable energy and growth.	The direction of causality depends on country context, method, energy type, and economic structure.
Energy transition and energy justice	[11]-[16]	Renewable energy policy, coal phase-out, and energy justice.	Transition requires institutions, financing, social legitimacy, and a fair distribution of benefits.
Electrification and development	[17]-[24]	Electricity access, employment, welfare, and productivity.	Impacts increase when electricity is reliable, affordable, and used productively.
Growth and structural transformation	[25]-[40]	Productivity, agriculture, manufacturing, institutions, and trade.	Energy supports productivity shifts toward higher value-added activities.
Indonesia/Kalimantan and biomass context	[41]-[44]	Palm oil biomass, exports, regional trade, agricultural spending, village funds, and poverty.	The regional context shows that energy transition should be connected with local value chains, trade, fiscal capacity, and sectoral development.

3.1. The evolution of the energy-growth nexus: from consumption relationships to transition quality

The energy-growth nexus cluster shows that renewable and non-renewable energy consumption has a complex relationship with economic growth. Early panel and causality studies report varied findings, ranging from the growth hypothesis, conservation hypothesis, feedback hypothesis, to the neutrality hypothesis [1]-[10]. These divergent results suggest that energy cannot be understood as a single homogeneous variable. Renewable energy, fossil energy, energy intensity, emissions, and trade openness have different implications for growth.

Methodologically, this cluster relies heavily on panel data, error correction models, and causality approaches. Its main strength lies in the ability to compare countries and periods, but its limitation is the tendency to treat energy as a macro aggregate that does not fully capture energy service quality, industrial structure, and the productive use of electricity. This review therefore interprets the energy-growth nexus as an initial foundation that needs to be enriched with the literatures on electrification, energy transition, and structural transformation.

3.2. Energy transition in developing countries: policy, institutions, and justice

The second cluster highlights that energy transition in developing countries is not merely a technological substitution from fossil fuels to renewable energy. Studies on Vietnam show that the success of solar and wind energy is influenced by policy instruments, incentive structures, public-private coordination, and the capacity of the state to manage coal phase-out [11]-[13]. In the Asian context, the green development agenda also requires strategies that can maintain economic growth while reducing carbon intensity [14].

The article on a bankable biomass energy system based on palm oil waste extends this argument by showing that renewable energy transition in developing countries must consider financing feasibility, business models, value-chain coordination, and optimization of waste utilization as an energy source [41]. Thus, energy transition is not only technological, but also organizational, financial, and business-ecosystem based.

In the broader Asian context, green development requires integration between economic growth and energy transformation [14]. However, the energy justice literature broadens this argument by emphasizing the importance of feminist, anti-racist, Indigenous, and postcolonial perspectives in understanding who benefits from and who bears the burdens of transition [15]. In addition, the unequal allocation of climate research funding shows that global knowledge production and financing do not always favor the regions that need them most [16].

3.3. Electrification as a micro- and meso-level development mechanism

The electrification literature provides evidence that is closer to the mechanisms of development. Studies from Vietnam, South Africa, Brazil, Nicaragua, and India show that electricity access can influence household welfare, labor force participation, business opportunities, productivity, and industrialization [17]-[24]. This evidence extends the energy-growth nexus by explaining the micro-level channels through which energy is linked to economic output.

However, the findings are not uniform. Electricity access can generate substantial impacts when costs, quality, and supply reliability support productive activities. Conversely, the impact of electrification may weaken when electricity is expensive, unstable, or not accompanied by the capacity of households and firms to use electricity in economic activities [22]-[24]. This finding is important because it shifts the policy focus from electrification alone toward productive electrification.

3.4. Structural transformation as a bridge between energy and long-term growth

The growth and structural transformation cluster provides a lens for explaining why energy and electrification can produce long-term development effects. The structural transformation literature emphasizes that sustainable growth occurs when labor and resources move from low-productivity activities toward higher-productivity sectors [25], [26], [39], [40]. In this process, energy and electricity function as prerequisites for mechanization, processing, transportation, manufacturing, and modern services.

The literature on agriculture and development shows that agricultural productivity can become an initial source of transformation through labor release, increased rural income, and local economic diversification [27]-[32]. Meanwhile, cross-country growth theory emphasizes the roles of human capital accumulation, institutions, trade, and export product quality in explaining income differences [33]-[38]. By connecting these two streams, energy can be viewed as an enabling factor that accelerates sectoral transformation when combined with investment, skills, institutions, and market integration.

3.5. Indonesia/Kalimantan context: biomass, trade, and sectoral development

Four additional articles strengthen the Indonesia and Kalimantan context in this synthesis. The study on a biomass energy system based on palm oil waste shows that regional renewable energy potential is determined not only by feedstock availability, but also by bankable business models, value-chain coordination, and the ability to connect plantation actors, waste processing, financing, and energy markets [41]. Palm oil biomass can therefore be positioned as a bridge between energy transition, local resource downstreaming, and regional economic strengthening.

Studies on exports of goods and services, the contribution of the trade sector, regional agricultural expenditure, and village funds extend the structural transformation argument at the regional level [42]-[44]. This literature indicates that regional economic performance depends not only on aggregate growth, but also on sectoral composition, local government fiscal capacity, external demand, and agricultural productivity. Within this SLR framework, these findings confirm that energy and electrification should be read together with local sectoral dynamics: reliable electricity and economically valuable renewable energy generate developmental impacts when connected to trade, agro-industry, and productive public spending.

3.6. Integrative synthesis framework

The synthesis of the five clusters shows that energy affects development through four main channels. First, the macroeconomic channel concerns the relationship among energy consumption, output, investment, and economic growth. Second, the micro-productive channel concerns how electricity access and quality affect households, employment, firms, and productive activities. Third, the structural channel concerns the role of energy in supporting the shift from low-productivity sectors toward higher value-added sectors. Fourth, the regional and value-chain channel concerns how renewable energy, biomass, trade, fiscal capacity, and agricultural development interact in regional economic contexts [41]-[44].

The integrative framework emerging from this review positions energy as enabling infrastructure. On the input side, energy type, electricity quality, costs, and reliability determine the capacity of the economy to generate output. On the mediation side, institutions, policies, financing, and social justice determine how energy is distributed and utilized. On the output side, the impacts of energy are reflected in growth, welfare, employment, productivity, and structural transformation. Energy therefore does not operate in isolation, but works through broader economic and institutional systems.

3.7. Research gaps and future research agenda

First, future research should move from bivariate energy-growth nexus models toward multidimensional models that incorporate electricity quality, sectoral structure, institutions, inequality, and emissions. Second, research should connect micro-level evidence on electrification with macro-level transformation, for example by tracing how electricity access affects firm productivity, labor reallocation, and sectoral diversification.

Third, the energy transition literature needs to integrate energy justice perspectives more strongly. Renewable energy policy should not be evaluated only through installed capacity or investment, but also through the distribution of access, affordability, public participation, impacts on fossil-sector workers, and benefits for local communities. Fourth, studies in developing countries should pay greater attention to the institutional, fiscal, and political contexts that determine the implementation capacity of energy transition.

Fifth, future research should strengthen the Indonesian regional context by examining how biomass energy potential, regional trade structure, sectoral public spending, and village funds interact in driving local economic transformation. This agenda is important because global evidence on energy and growth does not necessarily capture the characteristics of regions based on natural resources, plantations, and local fiscal structures, such as Kalimantan [41]-[44].

4. CONCLUSION

This review concludes that the literature on energy and economic development should be read integratively. The energy-growth nexus cluster shows that the relationship between energy consumption and economic growth is contextual and cannot be reduced to a single direction of causality. The energy transition cluster shows that policy, institutions, financing, business models, and social justice determine the success of transformation toward low-carbon energy. The electrification cluster provides evidence that electricity access can improve welfare and productivity, but its impact depends on quality, reliability, cost, and productive utilization. The structural transformation cluster explains that energy is an important prerequisite for long-term productivity shifts and industrialization. The Indonesia/Kalimantan cluster confirms that biomass, trade, agricultural expenditure, village funds, and regional economic dynamics need to be integrated to understand development transformation more contextually [41]-[44].

The main contribution of this article is to integrate five streams of literature that are often discussed separately. By positioning energy as enabling infrastructure, this review shows that low-carbon development requires not only increased renewable energy, but also high-quality electrification, effective institutions, just transition policies, bankable energy business models, structural transformation strategies, and links with regional economies. The policy implication is that developing countries need to integrate energy planning with industrialization strategies, regional development, trade, poverty reduction, agricultural sector strengthening, and sustainability agendas.

The limitation of this review is the use of metadata as the basis for synthesis, so the interpretation does not replace a full-text assessment of each article. Future research is encouraged to conduct a full-text SLR using a database search protocol, quality appraisal, bibliometric mapping, in-depth content analysis, and a distinction among reputable international peer-reviewed articles, national articles, and grey literature to test and extend the synthesis framework produced in this article.

ACKNOWLEDGMENTS

The authors gratefully acknowledge all parties who provided academic support during the preparation of this article. This section may be adjusted by adding the names of the institution, study program, supervisors, funding body, or other relevant parties before manuscript submission.

CONFLICT OF INTEREST STATEMENT

The authors declare that there are no conflicts of interest.

REFERENCES

[1] N. Apergis and J. E. Payne, "Renewable and non-renewable energy consumption-growth nexus: Evidence from a panel error correction model," Energy Economics, vol. 34, no. 3, pp. 733-738, 2012, doi: 10.1016/j.eneco.2011.04.007.

[2] P. Sadorsky, "Renewable energy consumption and income in emerging economies," Energy Policy, vol. 37, no. 10, pp. 4021-4028, 2009, doi: 10.1016/j.enpol.2009.05.003.

[3] O. Ocal and A. Aslan, "Renewable energy consumption-economic growth nexus in Turkey," Renewable and Sustainable Energy Reviews, vol. 28, pp. 494-499, 2013, doi: 10.1016/j.rser.2013.08.036.

[4] M. Bhattacharya, S. R. Paramati, I. Ozturk, and S. Bhattacharya, "The effect of renewable energy consumption on economic growth: Evidence from top 38 countries," Applied Energy, vol. 162, pp. 733-741, 2016, doi: 10.1016/j.apenergy.2015.10.104.

[5] R. Inglesi-Lotz, "The impact of renewable energy consumption to economic growth: A panel data application," Energy Economics, vol. 53, pp. 58-63, 2016, doi: 10.1016/j.eneco.2015.01.003.

[6] A. Alper and O. Oguz, "The role of renewable energy consumption in economic growth: Evidence from asymmetric causality," Renewable and Sustainable Energy Reviews, vol. 60, pp. 953-959, 2016, doi: 10.1016/j.rser.2016.01.123.

[7] C. T. Tugcu, I. Ozturk, and A. Aslan, "Renewable and non-renewable energy consumption and economic growth relationship revisited," Energy Economics, vol. 34, no. 6, pp. 1942-1950, 2012, doi: 10.1016/j.eneco.2012.08.021.

[8] A. N. Menegaki, "Growth and renewable energy in Europe: A random effect model with evidence for neutrality hypothesis," Energy Economics, vol. 33, no. 2, pp. 257-263, 2011, doi: 10.1016/j.eneco.2010.10.004.

[9] M. Sebri and O. Ben-Salha, "On the causal dynamics between economic growth, renewable energy consumption, CO2 emissions and trade openness," Renewable and Sustainable Energy Reviews, vol. 39, pp. 14-23, 2014, doi: 10.1016/j.rser.2014.07.033.

[10] M. A. Destek and A. Aslan, "Renewable and non-renewable energy consumption and economic growth in emerging economies," Renewable Energy, vol. 111, pp. 757-763, 2017, doi: 10.1016/j.renene.2017.05.008.

[11] T. N. Do and P. J. Burke, "Phasing out coal power in a developing country context: Insights from Vietnam," Energy Policy, vol. 176, Art. no. 113512, 2023, doi: 10.1016/j.enpol.2023.113512.

[12] T. N. Do, P. J. Burke, L. Hughes, and D. T. Ta, "Policy options for offshore wind power in Vietnam," Marine Policy, vol. 141, Art. no. 105080, 2022, doi: 10.1016/j.marpol.2022.105080.
[13] T. N. Do, P. J. Burke, H. N. Nguyen, I. Overland, and B. Suryadi, "Vietnam's solar and wind power success: Policy implications for the other ASEAN countries," Energy for Sustainable Development, vol. 65, pp. 1-11, 2021, doi: 10.1016/j.esd.2021.09.002.
[14] P. J. Burke and T. N. Do, "Greening Asia's economic development," Asian Development Review, vol. 38, no. 2, pp. 73-104, 2021, doi: 10.1162/adev_a_00165.
[15] B. K. Sovacool et al., "Pluralizing energy justice: Incorporating feminist, anti-racist, Indigenous, and postcolonial perspectives," Energy Research & Social Science, vol. 97, Art. no. 102996, 2023, doi: 10.1016/j.erss.2023.102996.
[16] I. Overland and B. K. Sovacool, "The misallocation of climate research funding," Energy Research & Social Science, vol. 62, Art. no. 101349, 2020, doi: 10.1016/j.erss.2019.101349.
[17] S. R. Khandker, D. F. Barnes, and H. A. Samad, "Welfare impacts of rural electrification: A panel data analysis from Vietnam," Economic Development and Cultural Change, vol. 61, no. 3, pp. 659-692, 2013, doi: 10.1086/669262.
[18] T. Dinkelman, "The effects of rural electrification on employment: New evidence from South Africa," American Economic Review, vol. 101, no. 7, pp. 3078-3108, 2011, doi: 10.1257/aer.101.7.3078.
[19] M. Lipscomb, A. M. Mobarak, and T. Barham, "Development effects of electrification: Evidence from the topographic placement of hydropower plants in Brazil," American Economic Journal: Applied Economics, vol. 5, no. 2, pp. 200-231, 2013, doi: 10.1257/app.5.2.200.
[20] L. Grogan and A. Sadanand, "Rural electrification and employment in poor countries: Evidence from Nicaragua," World Development, vol. 43, pp. 252-265, 2013, doi: 10.1016/j.worlddev.2012.09.002.
[21] J. P. Rud, "Electricity provision and industrial development: Evidence from India," Journal of Development Economics, vol. 97, no. 2, pp. 352-367, 2012, doi: 10.1016/j.jdeveco.2011.06.010.
[22] A. B. Abeberese, "Electricity cost and firm performance: Evidence from India," Review of Economics and Statistics, vol. 99, no. 5, pp. 839-852, 2017, doi: 10.1162/REST_a_00641.
[23] U. Chakravorty, M. Pelli, and B. U. Marchand, "Does the quality of electricity matter? Evidence from rural India," Journal of Economic Behavior & Organization, vol. 107, pp. 228-247, 2014, doi: 10.1016/j.jebo.2014.04.011.
[24] K. Lee, E. Miguel, and C. Wolfram, "Experimental evidence on the economics of rural electrification," Journal of Political Economy, vol. 128, no. 4, pp. 1523-1565, 2020, doi: 10.1086/705417.
[25] B. Herrendorf, R. Rogerson, and A. Valentinyi, "Growth and structural transformation," in Handbook of Economic Growth, vol. 2, Amsterdam, Netherlands: Elsevier, 2014, pp. 855-941, doi: 10.1016/B978-0-444-53540-5.00006-9.
[26] M. McMillan, D. Rodrik, and I. Verduzco-Gallo, "Globalization, structural change, and productivity growth," World Development, vol. 63, pp. 11-32, 2014, doi: 10.1016/j.worlddev.2013.10.012.
[27] C. P. Timmer, "Agriculture and economic development," in Handbook of Agricultural Economics, vol. 2, Amsterdam, Netherlands: Elsevier, 2002, pp. 1487-1546, doi: 10.1016/S1574-0072(02)10011-9.
[28] D. Gollin, S. Parente, and R. Rogerson, "The role of agriculture in development," American Economic Review, vol. 92, no. 2, pp. 160-164, 2002, doi: 10.1257/000282802320189177.
[29] D. Gollin, D. Lagakos, and M. E. Waugh, "The agricultural productivity gap," Quarterly Journal of Economics, vol. 129, no. 2, pp. 939-993, 2014, doi: 10.1093/qje/qjt056.
[30] P. Bustos, B. Caprettini, and J. Ponticelli, "Agricultural productivity and structural transformation: Evidence from Brazil," American Economic Review, vol. 106, no. 6, pp. 1320-1365, 2016, doi: 10.1257/aer.20131061.
[31] A. D. Foster and M. R. Rosenzweig, "Agricultural productivity growth, rural economic diversity, and economic reforms: India, 1970-2000," Economic Development and Cultural Change, vol. 52, no. 3, pp. 509-542, 2004, doi: 10.1086/420968.
[32] L. Christiaensen, L. Demery, and J. Kuhl, "The evolving role of agriculture in poverty reduction," Journal of Development Economics, vol. 96, no. 2, pp. 239-254, 2011, doi: 10.1016/j.jdeveco.2010.10.006.
[33] R. J. Barro, "Economic growth in a cross section of countries," Quarterly Journal of Economics, vol. 106, no. 2, pp. 407-443, 1991, doi: 10.2307/2937943.
[34] N. G. Mankiw, D. Romer, and D. N. Weil, "A contribution to the empirics of economic growth," Quarterly Journal of Economics, vol. 107, no. 2, pp. 407-437, 1992, doi: 10.2307/2118477.
[35] F. Caselli, "Accounting for cross-country income differences," in Handbook of Economic Growth, vol. 1, Amsterdam, Netherlands: Elsevier, 2005, pp. 679-741, doi: 10.1016/S1574-0684(05)01009-9.
[36] D. Rodrik, "Unconditional convergence in manufacturing," Quarterly Journal of Economics, vol. 128, no. 1, pp. 165-204, 2013, doi: 10.1093/qje/qjs047.

[37] D. Acemoglu, S. Johnson, and J. A. Robinson, "The colonial origins of comparative development," American Economic Review, vol. 91, no. 5, pp. 1369-1401, 2001, doi: 10.1257/aer.91.5.1369.

[38] R. Hausmann, J. Hwang, and D. Rodrik, "What you export matters," Journal of Economic Growth, vol. 12, pp. 1-25, 2007, doi: 10.1007/s10887-006-9009-4.

[39] M. McMillan and D. Rodrik, "Globalization, structural change and productivity growth," NBER Working Paper no. 17143, 2011, doi: 10.3386/w17143.

[40] W. A. Lewis, "Economic development with unlimited supplies of labour," The Manchester School, vol. 22, no. 2, pp. 139-191, 1954, doi: 10.1111/j.1467-9957.1954.tb00021.x.

[41] P. Y. Usaid, L. R. Said, R. T. A. Rahman, E. Sarpudin, I. Ahmadi, and F. Jayen, "Towards a bankable biomass energy system: A systematic review of business models and optimization of the palm oil waste value chain," Sharia Economic and Management Business Journal (SEMBJ), vol. 7, no. 1, pp. 115-132, 2026.

[42] P. Y. Usaid and S. Rahayu, "Pengaruh ekspor barang dan jasa terhadap kinerja ekonomi daerah dimoderasi konsumsi pemerintah di Pulau Kalimantan," Benefit: Journal of Business, Economics, and Finance, vol. 4, no. 2, pp. 1-22, 2026.

[43] P. Y. Usaid and S. Rahayu, "Analysis of the contribution of the trade sector in Hulu Sungai Tengah Regency (2019-2023)," Breakthrough Development Journal in Financial & Accounting, vol. 1, no. 3, pp. 1-12, 2025.

[44] P. Y. Usaid and A. Yunani, "Belanja daerah program sektor pertanian dan dana desa terhadap angka kemiskinan melalui PDRB sektor pertanian," Keizai, vol. 2, no. 2, pp. 101-110, 2021.