

Financial Performance Developments Towards Sustainability of Developing Countries in ASEAN

Rafika Sari¹⁾, Lili Syafitri²⁾, Ranti Puspita Sari³⁾

^{1), 2), 3)} Program Studi Akuntansi, Universitas Indo Global Mandiri, Palembang
Email: rafikasari@uigm.ac.id¹⁾, syafitri.lili@uigm.ac.id²⁾, rantipuspitasari@gmail.com³⁾

ABSTRACT

This study investigates the progress of financial performance and its consequences for the desires of developing countries in the ASEAN region. This study examines the complex relationship between financial indicators and desire outcomes, with the aim of gaining an understanding of the factors that influence and hinder the achievement of desire goals. This research uses an integrated approach that combines quantitative analysis with qualitative knowledge, using a mixed methods approach. Quantitative analysis uses regression analysis to test hypothesized relationships, while qualitative analysis uses thematic analysis to identify ethical considerations. This enhances their standing and fosters trust among stakeholders, ultimately contributing to organizational survival and stakeholder engagement as well as supporting the company's efforts to achieve a balance between profitability and social responsibility. Thus, it is hoped that this research can provide an important contribution to the literature discussing the relationship between financial performance and extinction in the ASEAN region, as well as providing practical recommendations for policy makers and industry players in improving their curiosity strategies. This research is also expected to provide a foundation for future research to explore other mechanisms that contribute to organizational desirability in developing countries. as well as providing new insights into how organizations in developing countries can leverage their resources strategically to create long-term value for stakeholders. By understanding the factors inhibiting and triggering disasters, this research also contributes to formulating more effective policies to support inclusive and sustainable economic transformation.

Keywords: Financial Performance, Sustainability Development, ASEAN

ABSTRAK

Studi ini menyelidiki kemajuan kinerja keuangan dan konsekuensinya terhadap keberlanjutan di negara-negara berkembang di kawasan ASEAN. Studi ini meneliti hubungan kompleks antara indikator keuangan dan hasil keberlanjutan, dengan tujuan untuk memperoleh pemahaman tentang faktor-faktor yang memengaruhi dan menghambat pencapaian tujuan keberlanjutan. Studi ini menggunakan pendekatan terpadu yang menggabungkan analisis kuantitatif dengan wawasan kualitatif, menggunakan pendekatan metode campuran. Analisis kuantitatif menggunakan analisis regresi untuk menguji hubungan yang dihipotesiskan, sedangkan analisis kualitatif menggunakan analisis tematik untuk mengidentifikasi pertimbangan etika. Hal ini meningkatkan kedudukan mereka dan menumbuhkan kepercayaan di antara para pemangku kepentingan, yang pada akhirnya berkontribusi pada kelangsungan hidup organisasi dan keterlibatan pemangku kepentingan serta mendukung upaya perusahaan dalam mencapai keseimbangan antara profitabilitas dan tanggung jawab sosial. Dengan demikian, studi ini diharapkan dapat memberikan kontribusi penting bagi literatur yang membahas hubungan antara kinerja keuangan dan keberlanjutan di kawasan ASEAN, sekaligus memberikan rekomendasi praktis bagi para pembuat kebijakan dan pelaku industri dalam meningkatkan strategi keberlanjutan mereka. Studi ini juga diharapkan dapat menjadi dasar bagi penelitian masa depan untuk mengeksplorasi mekanisme lain yang berkontribusi terhadap keberlanjutan organisasi di negara-negara berkembang, dan memberikan wawasan baru tentang bagaimana organisasi di negara-negara berkembang dapat secara strategis memanfaatkan sumber daya mereka untuk menciptakan nilai jangka panjang bagi para pemangku kepentingan. Dengan memahami faktor pendorong dan hambatan terhadap keberlanjutan, penelitian ini juga berkontribusi dalam merumuskan kebijakan yang lebih efektif untuk mendukung transformasi ekonomi yang inklusif dan berkelanjutan..

Keywords : Kinerja Keuangan, Keberlanjutan, ASEAN

1. Introduction

In recent times, climate change and environmental degradation have emerged as significant threats to the planet, human existence and the ecosystem as a whole. The latest report by the IPCC highlights that the current era is experiencing unprecedented global warming, unlike anything observed in the history of the Earth. Failure to adopt sustainable practices, as warned by the IPCC

(IPCC, 2015). Eradication of poverty and hunger, clean energy, economic growth, sanitation and clean water are expected to improve. Carbon dioxide (CO₂) emissions are worsening the environment. The United States EPA, a renowned authority on environmental issues, reports that greenhouse gas emissions increased by 35% between 1990 and 2010 due to human activities (EPA, 2016). Furthermore, UNEP has reported that the average surface temperature of the Earth has increased by about 0.89

degrees Celsius between 1901-2012. According to UNEP in 2014, it was projected that the average global temperature would increase by 0.3 to 0.7 degrees Celsius between 2016 and 2030. Since then, a number of international agreements and protocols (such as the Montreal Protocol of 1987) have been established to reduce the severity of climate change. However, the issue of climate change remains, causing significant and detrimental damage to ecosystems and life.

Most of these studies have focused on how trade openness and economic growth contribute to environmental degradation (HMD Wang & Sengupta, 2016). Although the current literature on environmental degradation pays little attention to the impact of economic growth on environmental problems, the few studies that have been conducted on this relationship have produced ambiguous results. (Gans & Ryall, 2017). Some argue that financial development removes constraints on credit, and as credit expands, it eventually leads to increased output. As a result, significant increases in production lead to greater greenhouse gas emissions due to large energy consumption. In addition, (Dewi and Widanaputra, 2023) argue that financial development, characterized by easy availability of bank loans, facilitates consumers' ability to acquire large-sized electronic goods. As a result, the manufacture and use of large-sized electronic devices drives energy consumption, leading to increased emissions of harmful pollutants. Likewise, additional research (He & Jiang, 2019; Khaskhely et al., 2022; Pater, 2021) supports the idea that financial development worsens environmental conditions by encouraging economic growth.

2. Theoretical Basis

Environment and financial development Researchers found that FD reduces CO₂ and improves the environment. (Feller et al., 2021) found that financial sector development reduces Asia's CO₂ emissions. Saud et al. (2019) found that FD reduces CO₂ emissions, improves the environment. Xu et al. (2022) analyzed MENA and found that foreign direct investment improves environmental conditions by promoting the use of less environmentally harmful technologies and increasing spending on research and development. BRICS financial and economic growth reduces CO₂ emissions. (Ma et al., 2025) found that economic and financial growth reduces CO₂ emissions. CO₂ emissions decrease with financial growth. Clean energy investment has reduced Pakistan's CO₂ emissions while economic growth has increased them. (Martynov & Shafti, 2016) found that an advanced financial sector reduces CO₂ emissions. Nasreen and Anwar 2014 found that Tunisia's financial development increases CO₂ emissions. The BRICS FD also worsens environmental quality, according to (Lin, 2019.) Financial development in Chinese cities improves water quality but decreases air quality, according to (Moneva et al., 2023). (Isnalita & Narsa, 2017) found that financial development increases CO₂ emissions and damages the environment. Energy consumption, economic growth, and

the environment. CO₂ emissions are increasing. Energy consumption and economic growth have increased CO₂ emissions, according to (Wang et al., 2022). Tunisia's energy consumption and economic growth are damaging the environment. The country's nature emits more CO₂. Khaskhely et al (2022) compared developed countries and those using PSRT. Energy consumption and income increase CO₂ emissions, they found. (Pereira & Martins, 2021) conducted an ARDL study in Malaysia. Both major pollution sources increase CO₂ emissions, they found. Energy consumption and economic growth increase CO₂ emissions and environmental degradation in low-, middle- and high-income countries, (Tamunotonye et al., 2023) used a conventional panel to find that economic growth improves the environmental performance of ASEAN and SAARC.

3. Methodology

This study examines how financial development affects environmental performance in five ASEAN countries: Vietnam, Malaysia, Thailand, Indonesia, and the Philippines. The study covers the years 2003–2016 because energy consumption data for these countries are only available up to 2016 (Mufasssir et al., 2024; Sasabella, 2024). The International Energy Agency (IEA) reports that these five economies consume 88% of the energy in the ASEAN region, which is experiencing phenomenal growth. The operational definitions of the variables are explained and summarized in Table 1. Previous studies on urbanization, growth, economy, energy consumption, and development finance are not similar to this study on these topics. This study stands out by assessing the environmental performance of five ASEAN developing economies using the Environmental Performance Index.

Table 1 Research Variables

Variable Name	Symbol	M
Environmental Performance Index	EPI	EPII
Financial Development	FD	GDP
Energy	EN	EU
Economic Growth	E.C.	GDP
Urbanization	URB	%PL

3.1 Data

The data used is secondary data using a website to see the economic growth and financial performance of a country.

3.2 Analysis Method

The analysis used is regression analysis with SPSS.

4. Results and Discussion

Descriptive statistics of the regressors and dependent variables are presented in Table 2.

Table 2 Descriptive Statistics Results

Variable	EPI	FD	EN	EC	URB
Mean	3.84	4.36	4.75	8.05	18.20
Maximum	4.49	5.12	5.01	9.24	19.35
Minimum	3.15	3.53	4.27	6.82	17.02
Std.Dev	0.22	0.50	0.20	0.11	0.69
Observations	80	80	80	80	80

The results of the analysis are presented in Table 3.

Table 3 F Test Results

Explained variable: LEPI				
Variable	Fixed effects (FE)		Random effects (RE)	
	Coefficient	P value	Coefficient	P value
FD	-0.000	0.97	0.002	0.043
EG	-0.074	0.81	-0.046	0.169
EG ²	0.289	0.00	0.279	0.000
EC	-0.499	0.41	-0.496	0.006
Urb	0.006	0.53	0.006	0.027
Constant	5.831	0.58	3.207	0.000
R ²	0.64		0.67	
F-statistics	4.18		Wald Chi2(4)	106.30
Prob	0.0117		0.000	
Correlated random effects-hausman test				
Test cross-section random effect				
Test summary	Chi-Sq. statistics		Chi-Sq.d.f	Prob
Cross-section random	27.61		5	0.0000

*, ** and *** indicate significant level at 1%, 5% and 10%, respectively

The Hausman test result ($p=0.00$) shows that the fixed effect estimator is reliable. The fixed effect (FE) result is inefficient and unreliable due to autocorrelation and heteroscedasticity.

Table 4 Wooldridge Test

	Presence
1 Autocorrelation: Wooldrige Test Prob > $F = (0.06)$	Yes
2 Heteroscedasticity Breusch-Pagan/Cook-Weisberg Test Prob > Chi2 = (0.02)	Yes
3 Multicollinearity VIF	No
Variable	VIF
FD	3.31
EC	3.06
Urb	1.51
EG	1.21
Total	2.23

In Table 4, both autocorrelation and heteroscedasticity of the data are shown alone. The results produced by the FE and RE estimators in this situation are inefficient and inconsistent. The Newey-West (NW) estimator is used in this investigation to investigate the autocorrelation and heteroscedasticity of the data. Where the NW estimator is able to reduce autocorrelation and heteroscedasticity, and produce unbiased, consistent, and efficient estimates. Table 5 shows the results of the NW estimator. The GLS-based estimator is used to ensure reliability, and the results are presented in

Table 5. Estimators such as NW and GLS

Explained variable: LEPI				
Variable	Newey West (NW)		Generalised least square (GLS)	
	Coefficient	P value	Coefficient	P value
FD	0.002	0.00*	0.002	0.03**
EG	-0.064	0.00*	-0.065	0.01*
EG ²	0.276	0.00*	0.288	0.00*
EC	-0.496	0.00*	-0.496	0.00*
Urb	-0.041	0.02*	-0.040	0.02*
Constant	3.20	0.363	3.54	0.000*

*, ** and *** indicate significant level at 1, 5 and 10%, respectively

Based on table 5 produces objective, efficient, consistent, and almost identical results. However, the results of the NW estimator are investigated in this study. Table 3 Fixed and random effect results Table 5 shows that financial development can improve environmental performance according to the NW estimator. This supports (Ma et al., 2025) The coefficient of financial development is low, indicating a small effect on EPI. However, the strong correlation of financial development with EPI indicates that it greatly improves environmental quality. Domestic credit is provided to environmentally friendly, clean, and sustainable private sector projects, which improves environmental quality. Table 5 shows that the environmental performance of ASEAN countries is negatively affected by the linear term coefficient of economic growth. It shows that the Environmental Performance Index (EPI) of ASEAN countries decreases by 0.064% for every 1% increase in economic growth. Table 4 Diagnostic Test This shows that early economic development is detrimental to the environment. However, the quadratic component of economic growth shows that after GDP growth reaches a certain threshold, it improves the environmental performance of selected ASEAN countries. In these countries, the EKC hypothesis is valid. By improving the quality of life, quadratic economic growth reduces the negative effects of industrialization and other environmental activities. Controlled energy consumption also has a negative impact on environmental performance. A 1% increase in energy consumption decreases environmental performance by 0.496%, according to Table 5. This supports previous research (Khaskhely et al., 2022) . In addition, urbanization has a negative impact on environmental performance, according to this study. Indeed, a 1% increase in urbanization in certain ASEAN countries decreases environmental performance by 0.041%.

5. Conclusion

Despite significant efforts to assess the impact of financial development, economic growth, energy consumption, or urbanization on the environment, the ASEAN region has received little attention in this area. Furthermore, the existing literature does not use a

comprehensive measure to represent overall environmental performance. Instead, it relies solely on CO₂ emissions as a proxy for assessing environmental quality. Therefore, this study complements the current body of research on financial development, environment, and urbanization by using the environmental performance index (EPI), which specifically focuses on the ASEAN region.

Financial development improves environmental performance, study finds. Similarly, economic growth improves environmental performance. Energy consumption is damaging the environment in five ASEAN countries. The findings suggest ASEAN financial institutions have been lending to environmentally conscious companies. More advanced and focused financial development and policies could improve ASEAN's environmental performance, our findings suggest. Overall, future governments of these countries should provide more loans to energy-efficient, environmentally friendly and sustainable projects. Other developing countries should fund environmental sustainability initiatives. Energy-efficient projects. Policymakers should also encourage sustainable economic growth and environmental performance. Due to its impact on the environment, developing countries should reduce and regulate energy consumption. The study suggests that ASEAN and other developing countries should prioritize energy. Transitioning away from fossil fuels could reduce greenhouse gas emissions in these countries.

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