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The Effect of the Human Development Index on Environmental Performance Index Measurement: A *Maqāṣid al-Sharī'ah* Perspective

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Abstract

This research aims to evaluate the improvement in the Human Development Index (HDI), which encompasses health, education, and income, between 2021 and 2023. Furthermore, this research analyses the relationship between the human development index and the environmental performance index from the perspective of *Maqāṣid al-Shari'ah*. Employing a mixed-methods approach, this study integrates qualitative and quantitative methodologies. The quantitative method uses linear regression for data analysis and interpretation with descriptive pattern qualitative analysis. The findings reveal a negative correlation between Indonesia's HDI and its EPI. Individuals with higher levels of education, better health, and increased income tend to exhibit greater awareness of environmental sustainability. This finding supports *Maqāṣid al-Shari'ah*, which emphasizes the importance of protecting life, education, property and offspring. Improving human welfare and protecting the environment are key to achieving sustainable development. Government policies should simultaneously promote human development and environmental protection. This fostered sustainable prosperity in line with the principles of *Maqāṣid al-Shari'ah*.

Kata Kunci:
IPM; IKLH; Analisis Regresi Linear; Maqāṣid al-Shari'ah

Abstrak

Penelitian ini bertujuan untuk mengevaluasi peningkatan IPM, yang mencakup kesehatan, pendidikan, dan pendapatan dari 2021 hingga 2023 serta hubungannya dengan kinerja lingkungan hidup yang kemudian dianalisis menggunakan *Maqāṣid al-Shari'ah*. Penelitian ini menggunakan metode campuran (*mixed-methods*), yaitu gabungan antara metode kualitatif dan metode kuantitatif. Metode kuantitatif dengan teknik analisis data uji regresi linier berganda dianalisis menggunakan analisis deskriptif kualitatif. Studi ini menemukan korelasi negatif antara Indeks Pembangunan Manusia (IPM) dan Indeks Kinerja Lingkungan Hidup (IKLH) Indonesia. Namun perbaikan pendidikan, kesehatan, dan pendapatan masyarakat berkorelasi positif dengan peningkatan kesadaran akan kelestarian lingkungan. Hasil ini sesuai dengan prinsip *Maqāṣid al-Shari'ah*, yang menekankan betapa pentingnya menjaga kehidupan, akal, harta, dan keturunan. Oleh karena itu, upaya untuk meningkatkan kesejahteraan manusia dan melindungi lingkungan bekerja sama untuk mencapai tujuan pembangunan berkelanjutan sangat penting. Kebijakan pemerintah harus dibuat untuk mendorong pembangunan manusia dan perlindungan lingkungan secara bersamaan dan menciptakan kesejahteraan yang berkelanjutan sejalan dengan *Maqāṣid al-Shari'ah*.

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INTRODUCTION

The growth rate of the Human Development Index (HDI) is a crucial indicator of social and economic well-being in Indonesia, as it reflects the overall quality of life of the population.[1] While it should also improve the environment, an imbalance often occurs between human development and environmental preservation.[2] In many instances, human progress is not accompanied by measures to protect ecosystems, which can lead to environmental degradation.[3]

There is a discrepancy between the anticipated outcomes (*das sollen*) and the actual outcomes (*das sein*) in human development and environmental conservation policies. An increase in the HDI is expected to coincide with an increase in environmental quality. However, in practice, there are disparities in the education, health, and environmental sectors.[4] In an ideal scenario, any quality-of-life enhancement would be aligned with environmental sustainability. However, in practice, there have been instances where policies have not been sufficiently consistent in achieving this balance.[5]

The extant literature on the relationship between an increase in the Human Development Index (HDI) and the Environmental Performance Index (EPI) in Indonesia is incomplete in several respects. While a substantial body of literature has examined the impact of electricity consumption on economic growth, relatively few studies have investigated the direct impact of human development elements, such as energy access, on environmental well-being.[6] The unequal distribution of human capital across regions in Indonesia has the potential to influence economic growth. However, there is a lack of rigorous studies that examine its impact on regional environmental quality.[7] While there is a modest body of research on the effect of economic diversification on regional economic growth, studies exploring how this diversification affects environmental quality remain limited.[8] Moreover, most of the existing research has focused primarily on the impact of energy consumption on the economy.[9] A limited number of studies have directly examined the contributions of human development factors, such as education and health, to environmental quality. The existing literature also lacks research examining the impact of

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[1] Resa Septiani Pontoh et al., 'Assessing Sustainable Development in Community Welfare and Economic Resilience to Extreme Weather in Indonesia', *Sustainability* 16, no. 15 (5 August 2024): 6693, https://doi.org/10.3390/su16156693.

[2] Ernanto et al., 'Enhancing Human Capital in Indonesia: Does Economic Policy Work?', *International Journal of Sustainable Development and Planning* 19, no. 5 (29 May 2024): 1963–69, https://doi.org/10.18280/ijsdp.190535.

[3] Annie Haakenstad et al., 'Assessing Performance of the Healthcare Access and Quality Index, Overall and by Select Age Groups, for 204 Countries and Territories, 1990–2019: A Systematic Analysis from the Global Burden of Disease Study 2019', *The Lancet Global Health* 10, no. 12 (2022), https://doi.org/10.1016/S2214-109X(22)00429-6.

[4] Nicholas Graetz et al., 'Mapping Disparities in Education across Low- and Middle-Income Countries', *Nature* 577, no. 7789 (2020), https://doi.org/10.1038/s41586-019-1872-1.

[5] L Sukarniati, F R A Lubis, and N A A Zakiyyah, *Ekonomi Pembangunan (Teori Dan Tantangan Di Negara Berkembang)* (Yogyakarta: UAD PRESS, 2021).

[6] Suryanto Suryanto et al., 'The Impact of Electricity Consumption to Human Development Index in Asian Countries: Analysis Panel Vector Error Correction Model', *International Journal of Energy Economics and Policy* 13, no. 2 (24 March 2023): 240–46, https://doi.org/10.32479/ijeep.13947.

[7] Kikin Windhani et al., 'Human Capital and Regional Economic Growth in Indonesia: A Spatial Analysis Approach', *Indonesian Journal of Geography* 55, no. 3 (12 December 2023), https://doi.org/10.22146/ijg.88241.

[8] A. P. Siregar and N. P. A. Widjanarko, 'Impact of Diversity on Regional Economic Growth: A Case Study of Indonesia', *Economy of Regions* 19, no. 3 (2023): 870–83, https://doi.org/10.17059/ekon.reg.2023-3-19.

[9] Pontoh et al., 'Assessing Sustainable Development in Community Welfare and Economic Resilience to Extreme Weather in Indonesia'.

economic diversification on the Environmental Performance Index (EPI), particularly in the Indonesian context, where disparities in human capital exist across regions.

This study adopts a distinctive methodology by integrating the *Maqāṣid al-Shari'ah* perspective to examine the relationship between HDI enhancement and environmental performance. In this analysis, *Maqāṣid al-Shari'ah* provides a framework that emphasizes the balance between human well-being and environmental preservation, aligning with Shariah's objective of prioritizing societal benefits while preventing harm.[10]

This study aims to address the existing gap in the literature by directly investigating the contribution of human development index (HDI) elements to environmental sustainability in Indonesia. The initial proposition is that there is a positive correlation between the HDI and the Environmental Quality Index. If the correlation is negative, an investigation is conducted based on the *Maqāṣid al-Shari'ah* perspective.

RESEARCH METHODS

This research employs a mixed-methods design, integrating both quantitative and qualitative approaches to examine the relationship between the Human Development Index (HDI) and the Environmental Performance Index (EPI).[11] This approach offers a detailed understanding of the transformative nuances involved. The quantitative approach uses statistical tests, whereas the qualitative approach uses descriptive-explanatory analyses based on *Maqāṣid al-Shari'ah* to comprehensively interpret the quantitative results.

The data for this study is derived from secondary sources, specifically the Central Bureau of Statistics, and encompasses figures from 2021 to 2023. These figures pertain to average years of schooling, life expectancy, and the Human Development Index (HDI). To interpret the results of the correlation and linear regression tests, we employed data from a variety of sources, including development economics journals, law journals, and the Central Bureau of Statistics, as well as the Ministry of Environment's, Environmental Performance Index (IKL) by province in Indonesia, all of which were used to create a comparable dataset spanning the same period.[12]

The study used a triangulation approach to ensure the veracity and reliability of the data, whereby the BPS data were compared with other relevant literature sources. The quantitative data were validated through a classical assumption test prior to regression analysis.

The data analysis in this study comprises two stages. First, multiple linear regression tests were employed to ascertain the impact of the independent variables (X1: average years of schooling and X2: life expectancy) on the dependent variable (Y: HDI). The regression outcomes were subsequently subjected to further analysis through descriptive qualitative investigation, utilizing the *Maqāṣid al-Shari'ah* approach, with the objective of elucidating

[10] Aslati et al., 'Utilizing Science and Maqāṣid Al-Sharī'ah in Resolving Contemporary Issues of Islamic Family Law', *Al-Manahij: Jurnal Kajian Hukum Islam* 18, no. 1 (2024): 17–36, https://doi.org/10.24090/mnh.v18i1.10571.

[11] L Weik, 'Understanding Inherent Influencing Factors to Digital Health Adoption in General Practices through a Mixed-Methods Analysis', *Npj Digital Medicine* 7, no. 1 (2024), https://doi.org/10.1038/s41746-024-01049-0.

[12] Adelia Tesalonika and Hady Sutjipto, 'Human Capital Dan Masyarakat Ekonomi Sirkular: Teologis Keberlanjutan Global Di Indonesia', *Economic Military and Geographically Business Review* 1, no. 1 (2023), https://doi.org/10.61511/emagrap.v1i1.2023.94.

the implications of the statistical results on the shariah objectives pertaining to human development and environmental preservation.[13]

RESULTS AND DISCUSSION

The relationship between the economy and the environment can be understood as an interconnected system, where natural resources serve as inputs for production activities. These activities not only generate tangible goods but also contribute to essential aspects of human life, such as comfort, education, social interaction, and cultural development.[14] The assessment of utility in individuals is calculated from two factors: consumption activities involving goods and services and the state of the surrounding natural environment. Individuals employ the natural environment as a means of producing goods and services, thereby seeking to attain satisfaction in the form of both profit and happiness.[15] Therefore, the environment is crucial for human survival. The utilization of forests for the production of paper for the manufacture of books and the extraction of sand, for example, is intended to meet the needs of the education sector and the real estate sector. However, this will have an impact on other service sectors, namely, the provision of clean air for individual health.[16]

This research investigates the impact of independent variables, such as average years of schooling and life expectancy, on the Human Development Index (HDI). Using linear regression, the study explores the relationship between the independent variables (X1: average years of schooling and X2: life expectancy) and the dependent variable (Y: HDI) to quantify their effects. The findings provide valuable insights into the factors influencing HDI in Indonesia and highlight their implications for the Environmental Performance Index (EPI).

Description of Empirical Findings Regarding HDI Improvement (2021-2023)

The Human Development Index (HDI) is a composite measure used to assess human development within a country. It is influenced by three key indicators: life expectancy at birth, which reflects the overall health of the population, as well as education and income levels. A high life expectancy suggests favorable health conditions and adequate access to healthcare services.[17] Second, the average years of schooling and expected years of schooling are considered. The former reflects the level of education based on the average length of time the population spends in school, whereas the latter is measured by the age of the child about to enter primary education.[18] This indicator reflects the extent to which the

[13] Masri Singaribun and Sofyan Effendi, *Metode Penelitian Survei* (Jakarta: LP3ES, 1987), 254.
[14] Robi Kurniawan and Shunsuke Managi, 'Economic Growth and Sustainable Development in Indonesia: An Assessment *', *Bulletin of Indonesian Economic Studies* 54, no. 3 (2018), https://doi.org/10.1080/00074918.2018.1450962.
[15] Meng Shang et al., 'Understanding the Importance of Sustainable Ecological Innovation in Reducing Carbon Emissions: Investigating the Green Energy Demand, Financial Development, Natural Resource Management, Industrialisation and Urbanisation Channels', *Economic Research-Ekonomska Istrazivanja* 36, no. 2 (2023), https://doi.org/10.1080/1331677X.2022.2137823.
[16] A Budiono et al., 'Local Value-Based Forest Resource Conservation Policies In Saradan, Madiun Regency (Social Forestry Policy)', *Syntax Literate;* …, 2022.
[17] M Bakır, 'The Influence of Environmental Knowledge on Green Purchase Intention in the Air Travel Industry: The Mediating Role of Green Attitude', *International Journal of Sustainable Aviation*, 2023, https://doi.org/10.1504/IJSA.2023.134332.
[18] Junaidi Budi Prihanto et al., 'Health Literacy, Health Behaviors, and Body Mass Index Impacts on Quality of Life: Cross-Sectional Study of University Students in Surabaya, Indonesia', *International Journal of Environmental Research and Public Health* 18, no. 24 (2021), https://doi.org/10.3390/ijerph182413132.

population of a country has access to and the quality of the education that is available to them. The third indicator is gross national income (GNI) per capita, which gauges living standards by measuring the average income received by the population. A high income is typically associated with the capacity to meet fundamental necessities, including food, shelter, and healthcare.[19] This research utilizes two key indicators to evaluate the Human Development Index (HDI): education level, measured by the average number of years spent in school, and health, represented by life expectancy at birth. The data, presented in Table 1, was sourced from the Central Bureau of Statistics for the years 2021 to 2023. The study sample includes four cities: Surakarta, Jambi, Makassar, and Kupang. Additionally, the data is used to develop a metric for the Environmental Performance Index (EPI).

The selection of Surakarta City, Jambi City, Makassar City, and Kupang City as research objects is based on their diverse social, economic, and geographical characteristics, which collectively represent the variety found across Indonesia. Geographically, Surakarta is located in Java with superior infrastructure, Jambi is situated in Sumatra with emerging urban characteristics, Makassar is located in Sulawesi as the economic center of eastern Indonesia, and Kupang is located in East Nusa Tenggara, reflecting a region with emerging development potential. This geographic diversity allows for a comprehensive analysis that spans various regions of Indonesia. Furthermore, the cities differ in their Human Development Index (HDI) levels: Surakarta and Makassar boast high HDIs (over 82 in 2021), while Jambi and Kupang have slightly lower scores. This variation offers valuable insights into HDI across different regions. From a social and economic standpoint, Surakarta and Makassar are large cities with dynamic economic activities, while Jambi and Kupang show more balanced economic development, offering a variety of socio-economic dimensions for study. The selection of these four cities is further substantiated by statistical data obtained from BPS for the 2021-2023 period. This data is consistent and includes significant indicators such as average years of schooling, life expectancy, and HDI, thereby enhancing the study's validity and comprehensiveness.

Table 1. Central Bureau of Statistics (BPS) Data for the period of 2021–2023

Year	City	Average Years of Schooling	Life Expectancy	Human Development Index (HDI)
2021	Surakarta	10.90	77.32	82.62
2021	Jambi	11.20	74.37	79.12
2021	Makassar	11.43	74.71	82.66
2021	Kupang	11.60	73.94	79.74
2022	Surakarta	10.92	77.43	83.08
2022	Jambi	11.21	74.61	79.58
2022	Makassar	11.55	74.96	83.12

[19] Ridwan Iskandar et al., 'International Journal of Sustainable Development and Planning Assessing the Sustainability and Performance of Local Soybean Production in Indonesia : A Multidimensional Scaling Analysis' 19, no. 2 (2024): 539–48.

Year	City	Average Years of Schooling	Life Expectancy	Human Development Index (HDI)
2022	Kupang	11.61	74.29	80.20
2023	Surakarta	11.00	77.63	83.54
2023	Jambi	11.32	74.85	80.15
2023	Makassar	11.56	75.15	83.52
2023	Kupang	11.62	74.66	80.62

Source: Annual report of the Central Bureau of Statistics (BPS) related to HDI and its components for districts/cities for the period 2021-2023

BPS data from 2021-2023 show that Indonesia's human development index (HDI) fluctuates due to average years of schooling and life expectancy. In 2021, the HDI ranged between 79.12 and 82.66, with an average of 10.90 to 11.60 years of schooling and a life expectancy of between 73.94 and 77.32 years. In 2022, several indicators increased, with the HDI reaching 83.12. The mean years of schooling increased from 10.92 to 11.61, whereas life expectancy declined slightly, from 73.94 to 77.43. In 2023, the HDI reached 80.15–83.54, with an average of 11.62 years of schooling and stabilized life expectancy.

The data reveal a general improvement in the HDI, reflecting an increase in the overall quality of life. This progress is driven by advancements in education and health. A higher average number of years of schooling provides greater educational opportunities, contributing to a more skilled and competitive workforce. Meanwhile, a stable life expectancy indicates efforts to enhance healthcare and living conditions. These improvements impact the overall quality of life, increasing it due to improvements in the two main HDI components. This increase demonstrates progress towards Indonesia's SDGs, particularly for quality education and health.

This research uses a statistical method, specifically multiple linear regression, to examine the relationship between these variables.[20] The following hypotheses are to undergo testing: (1) The null hypothesis (H0) posits that the average level of schooling (education level) and the Human Development Index do not exert an effect on the Environmental Performance Index. (2) The alternative hypothesis (H1) posits a relationship between average schooling (education level), the Human Development Index, and the Environmental Performance Index. The level of significance is a key factor in determining the outcome of any given decision. If the probability value is less than 0.05, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. If the significance value is less than 0.05, the null hypothesis is rejected; if it is greater, the opposite is true.

[20] Hanudin Amin, 'An Analysis of Online Sadaqah Acceptance among University Graduates in Malaysia', *International Journal of Islamic and Middle Eastern Finance and Management* 15, no. 6 (2022), https://doi.org/10.1108/IMEFM-01-2019-0020.

Tabel 2. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.589	25.705		.295	.775
	Average Years of Schooling (X1)	.216	1.321	.057	.164	.874
	Human Development Index (X2)	.000	.212	-.001	-.002	.998

a. Dependent Variable: Environmental Performance Index (Y)

Source: Data Processed by the author, (2024).

Table 2 demonstrates that the two-tailed significance value for the average years of schooling is 0.874, while the corresponding figure for the Human Development Index is 0.998. These values are greater than 0.05, indicating that the null hypothesis is accepted and the alternative hypothesis is rejected.

The following figures present a graphical illustration of the data on the average years of schooling, the Human Development Index, and the Environmental Performance Index:

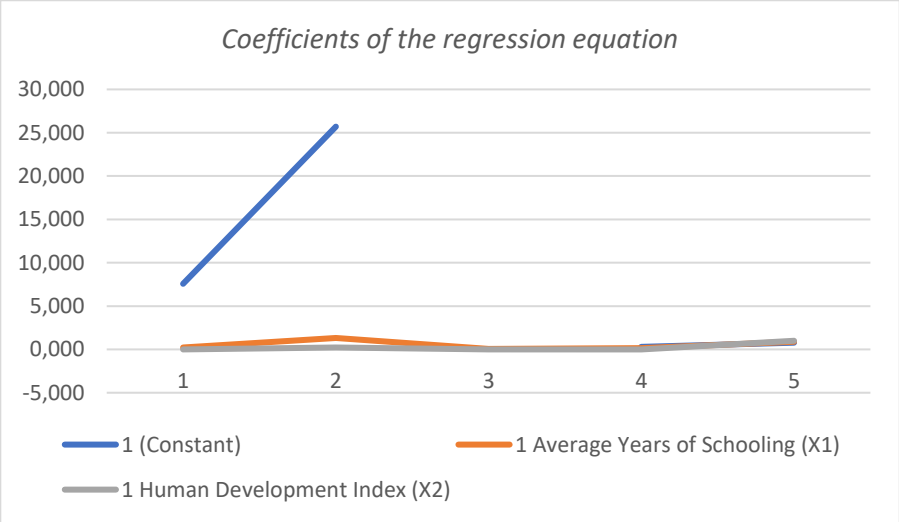

Figure 1. Coefficients of the regression equation
Source: Data Processed by the author, (2024).

The regression equation for the average years of schooling and the Human Development Index regarding the Environmental Performance Index is y = 7.589x + 0.216. No statistically significant correlation was observed between the average years of schooling and the Human Development Index concerning the Environmental Performance Index. An alteration in the value assigned to the average years of schooling (X1) and the Human Development Index (X2) does not result in a substantial change in the Environmental Performance Index (Y).

Tabel 3. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.057[a]	.003	-.218	1.16656	.003	.015	2	9	.986

a. Predictors: (Constant), Human Development Index (X2), Average Years of Schooling (X1)

b. Dependent Variable: Environmental Performance Index (Y)

Source: Data Processed by the author, (2024).

The coefficient of determination of 0.003 indicates that a simultaneous influence of 0.3% on the Environmental Performance Index (Y) variable by the average years of schooling (X1) and Human Development Index (X2) variables is the maximum that can be expected. For a visual illustration of this, refer to Table 3.

The findings are supported by an analysis of BPS data. Between 2021 and 2023, the mean number of years of schooling rose from 10.90 to 11.62 years, while life expectancy at birth remained relatively stable, ranging from 73.94 and 77.63 years. These changes contributed to an overall increase in life expectancy. There has been an increase in the human development index (HDI). An increase in the Human Development Index (HDI) indicates an improvement in the quality of life for a given population, achieved through increased access to education and health services. This, in turn, supports sustainable economic growth. The role of universities in advancing human development through the expansion of educational opportunities and the advancement of skills is crucial in maximizing the demographic dividend projected for 2030. Furthermore, an increase in the HDI and improvements in health through inclusive and high-quality education will support the achievement of various sustainable development goals.

Relationship between the Human Development Index and the Environmental Performance Index

A comparison of the data analysis results from the Central Statistics Agency (BPS) for the years 2021--2023 is presented here to measure the influence of the Human Development Index (HDI) in conjunction with the Environmental Performance Index (EPI).

Table 4. Central Bureau of Statistics (BPS) Data for the period of 2021–2023

Year	City	Human Development Index (HDI)	Environmental Performance Index (EPI)
2021	Surakarta	82.62	8.25
2021	Jambi	79.12	10.08
2021	Makassar	82.66	10.62
2021	Kupang	79.74	11.18

Year	City	Human Development Index (HDI)	Environmental Performance Index (EPI)
2022	Surakarta	83.08	10.44
2022	Jambi	79.58	10.92
2022	Makassar	83.12	8.72
2022	Kupang	80.20	10.13
2023	Surakarta	83.54	11.20
2023	Jambi	80.15	8.44
2023	Makassar	83.52	10.69
2023	Kupang	80.62	9.37

Source: Annual report of the Central Bureau of Statistics (BPS) related to HDI and EPI for districts/cities for the period 2021-2023

As illustrated in the table, the subsequent linear regression test yielded the following results:

Table 5. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.016[a]	.000	-.100	1.10835	.000	.003	1	10	.961

a. Predictors: (Constant), Human Development Index (X1)

b. Dependent Variable: Environmental Performance Index (Y)

Source: Data Processed by the author, (2024).

Table 6. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.003	1	.003	.003	.961[b]
	Residuals	12.284	10	1.228		
	Total	12.287	11			

a. Dependent Variable: Environmental Performance Index (EPI)

b. Predictors: (Constant), Human Development Index (HDI)

Source: Data Processed by the author, (2024).

Table 7. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.799	15.799		.684	.510
	Human Development Index (HDI)	-.010	.194	-.016	-.050	.961

a. Dependent Variable: Environmental Performance Index (EPI)

Source: Data Processed by the author, (2024).

The regression analysis yielded the following results: the R and R-squared values were 0.016, indicating a very weak relationship between the HDI and MHI. The R-squared value, or R^2, is 0.000, indicating that none of the variation in the MHI can be explained by the HDI, implying that the regression model does not effectively explain the relationship between the two variables. In the ANOVA, the F value was 0.003, with a p value (Sig.) of 0.961. This finding indicates that the regression model is not statistically significant. In other words, the evidence is insufficient to suggest that the HDI affects the HDI. The coefficient for HDI is -0.010, indicating that for each one-unit increase in HDI, there is an expected decrease of 0.010 units. Nevertheless, the p value for this coefficient is 0.961, which is considerably above the conventional significance level (0.05), indicating that this coefficient is not statistically significant.

Based on the analysis, it can be concluded that the Human Development Index (HDI) does not have a significant impact on the Environmental Performance Index (EPI). Although a very weak relationship was detected, both the low R^2 value and the nonsignificant ANOVA results indicate that changes in the HDI are not associated with changes in the EPI. In other words, while the HDI may influence various aspects of development, there is no evidence in this context to support the hypothesis that an increase in HDI directly improves environmental performance. This may be attributed to the influence of additional, more dominant factors affecting the HSE, which are not encompassed by the HDI.

Calculation Analysis of HDI and EPI with *Maqāṣid al-Shari'ah* Aspects

The *Maqāṣid al-Shari'ah* approach to human and environmental development is based on the premise that human welfare is to be protected across five key domains: religion (*hifdz al-Dīn*), soul (*hifdz al-Nafs*), intellect (*hifdz al-'Aql*), offspring (*hifdz al-Nasl*), and wealth (*hifdz al-Māl*). In the context of the Human Development Index (HDI), there has been an increase in the average years of education from 10.90 in 2021 to 11.62 in 2023, indicating enhanced access to education. This enhancement in educational attainment has the potential to foster greater religious literacy, which could, in turn, lead to a deeper understanding and practice of religious obligations. However, regression analysis reveals that the average years of education do not exert a significant effect on the Environmental Performance Index (EPI), as evidenced by a p-value of 0.874. This lack of effect is likely due to the absence of an integration between education and environmental awareness rooted in religious values.

The aspect of protecting the soul (*hifdz al-Nafs*) is reflected in the stability of community life expectancy, which ranged from 73.94 to 77.63 years between 2021 and 2023 period. This trend suggests that the standard of health services is adequate, in line with the principles of *Maqāṣid al-Shari'ah*. However, the regression results indicate that health, when considered as an indicator within the HDI, does not exert a significant influence on HDI, as evidenced by a p-value of 0.998. This suggests that enhancing the quality of public health has not been successful in altering the attitudes and behaviours of individuals who prioritise environmental concerns.

The increase in the average duration of education reflects efforts to enhance the

intellectual capacity of the population (*hifdz al-'Aql*). A more profound comprehension of these concepts is expected to foster awareness regarding the paramount importance of sustainable development and environmental conservation. However, the analysis indicates that the impact of education on the Environmental Performance Index (EPI) is minimal, as evidenced by a coefficient of determination (R^2) of 0.003. This finding underscores the necessity for integrating environmental values into the education curriculum. Conversely, enhancing the quality of life through educational and health services contributes to the safeguarding of future generations (*hifdz al-Nasl*). The stability of HDI is indicative of the commitment to safeguarding the well-being of future generations. Nonetheless, the lack of a strong correlation between HDI and EPI suggests that efforts to protect children have not been sufficiently directed towards enhancing the quality of a sustainable environment.

In the context of property protection (*hifdz al-Māl*), an enhancement in the quality of life, as evidenced by an increase in per capita income, empowers individuals to meet fundamental needs, encompassing ecosystem preservation. However, the findings of the analysis suggest that economic growth has not been significantly conducive to environmental preservation, as evidenced by the negligible correlation between HDI and EPI. This finding underscores the necessity for policies that integrate economic growth with environmental protection, aligning more closely with *Maqāṣid al-Shari'ah* principles.

This research makes a novel contribution through an analytical approach that integrates the Human Development Index (HDI) and the Environmental Performance Index (EPI) within the *Maqāṣid al-Shari'ah* framework. The originality of this study lies in its finding that, while the increase in HDI reflects progress in education, health, and income, its contribution to the EPI remains insignificant. This finding reveals a discrepancy between human development and environmental sustainability within the context of *Maqāṣid al-Shari'ah* values. As such, the findings of this study are expected to significantly contribute to the development of education, health, and economic policies that aim to strike a balance between human welfare and environmental sustainability.

Discussion

The relationships between the components of the Human Development Index (HDI), as shown by the data above, reveal inconsistencies across five key domains. In the initial period, from 2021 to 2023, the mean number of years spent in education gradually and consistently increased, from 10.90 years to 11.62 years, respectively. However, this figure is inversely proportional to the health quality figure, as there is no discernible pattern. The life expectancy index fluctuates between 77.32 in 2021 and 73.94 in 2022 before increasing to a range of 74.66--77.63 in 2023.[21]

This finding suggests that the observed increase in the HDI is not accompanied by an analogous increase in health-related indicators. The data show that the observed increase in the HDI from 79.12 in 2021 to 83.54 in 2023 was primarily driven by improvements in

[21] Batara Surya et al., 'Economic Growth, Increasing Productivity of SMEs, and Open Innovation', *Journal of Open Innovation: Technology, Market, and Complexity* 7, no. 1 (March 2021): 20, https://doi.org/10.3390/joitmc7010020.

education (as reflected in the average years of schooling), rather than by changes in life expectancy. In conclusion, the observed increase in Indonesia's HDI is largely attributable to a narrow focus on a single indicator, which fails to capture the full spectrum of improvements in HDI quality.[22]

Second, the regression results indicate that the contribution of average years of schooling (coefficient B = 5.605) to the HDI is more significant than that of life expectancy (coefficient B = 1.850). This finding indicates that although both indicators contribute positively, education has a greater impact on the HDI, resulting in an imbalance in the contributions of its constituent elements. The growth in life expectancy is relatively stable but insignificant, indicating the need for the implementation of more comprehensive health policies.[23]

Third, the findings of the correlation test between the Human Development Index and the Environmental Performance Index demonstrate an unequal distribution of focus between human development and environmental management in Indonesia. As the human development index (HDI) increases, the environmental performance index (EPI) tends to decrease. This consequently indicates that the Indonesian government's economic policy in the 2022--2023 period was primarily oriented towards economic growth, with a relative lack of attention given to environmental sustainability.[24]

Fourth, should the HDI increase from 79.12 to 83.54 by 2023? The EPI shows no discernible pattern, fluctuating between 8.25 and 11.20, with no clear correlation with the observed increase in HDI. EPI values are typically lower when the HDI is high. This shows that Indonesia's rise in HDI from 2022--2023 was not matched by an equivalent improvement in environmental quality. Exploiting natural resources excessively to support human development demonstrates the partiality of economic growth in Indonesia.

Fifth, one cause of the negative relationship is that efforts to increase the HDI, especially through increasing income, can result in environmental degradation. This may occur as a consequence of the exploitation of natural resources or industrialization, which is not environmentally friendly. The EPI is influenced not only by the indicators included in the HDI but also by several additional factors, including environmental policies, pollution levels, resource management practices, and public environmental awareness.

The Relationship between the Human Development Index and the Environmental Performance Index from the Perspective of *Maqāṣid al-Shari'ah*

Maqāṣid al-Shari'ah refers to the purpose, effect, wisdom, and underlying meaning behind the existence of legislation and its rulings. Furthermore, *Maqāṣid al-Shari'ah* can be defined as the objective that the Shari'ah strives to attain to facilitate benefits and mitigate harm in

[22] Sujarwoto, 'Development as Happiness: A Multidimensional Analysis of Subjective Well-Being in Indonesia', *Economics and Sociology* 14, no. 2 (2021), https://doi.org/10.14254/2071-789X.2021/14-2/15.
[23] Hadi Tjahjanto et al., 'High Unemployment, Disrupted Economic Growth and Sustainable Development Goals: Analyzing Unemployment Reduction', *Economics & Sociology* 16, no. 1 (2023): 106–20, https://doi.org/10.14254/2071-789X.2023/16-1/7.
[24] Sonali Kundu et al., 'Wetland Degradation and Its Impacts on Livelihoods and Sustainable Development Goals: An Overview', *Sustainable Production and Consumption* 48 (July 2024): 419–34, https://doi.org/10.1016/j.spc.2024.05.024.

this world and religion.[25]

The principles of *Maqāṣid al-Shari'ah* are as follows: 1) the preservation of religion (*hifdz al-Dīn*) signifies the upholding of the fundamental tenets and legal principles of religion in human existence; 2) the preservation of the soul (*hifdz al-Nafs*) denotes the right of the soul to life, security, dignity, and honor; and 3) the preservation of the intellect (*hifdz al-'Aql*) represents the tenets of Islam. The fourth condition is the safeguarding of property, which encompasses the development, enrichment, and protection of assets from damage, loss, and scarcity. The fifth condition is the safeguarding of offspring, which entails ensuring their succession as the future of the universe. The preservation of lineage entails the establishment of a legitimate relationship through legal marriage, thereby ensuring the transparency of origins, branches, parents, and their children. The maintenance of honor entails the preservation of dignity, chastity, and honor.[26]

Maqāṣid al-Shari'ah underscores the importance of attaining benefits for individuals and society. Consequently, government policies should strive to increase quality of life, diminish poverty, and foster social justice. Additionally, the objectives of *Maqāṣid al-Shari'ah* include environmental protection and the sustainable management of natural resources.[27]

The correlation between the Human Development Index (HDI) and the Environmental Performance Index (EPI) within the context of *Maqāṣid al-Shari'ah* underscores the importance of integrating human development and environmental conservation as a means of attaining benefits. Despite the absence of a statistically significant correlation between the Human Development Index (HDI) and the Environmental Performance Index (EPI), as indicated by linear regression analysis, the HDI reflects quality of life within a community, as evidenced by the presence of indicators pertaining to education, health, and income. This observation aligns with the principle of *hifdz al-Nafs* (preservation of the soul). The enhancement of quality of life is inextricably linked to the presence of a salubrious environment. The EPI assesses environmental performance in relation to natural resources. The principle of *hifdz al-Māl* emphasizes the importance of responsible resource management. The deterioration of the natural environment can have detrimental consequences for economic prosperity, reinforcing the necessity of environmental conservation.

However, a challenge arises when progress in HDI is not always accompanied by improvements in the EPI. This highlights the need for balanced and integrated policies. Development policies must be crafted with the principles of Maqāṣid al-Shari'ah in mind, such as hifdz al-'Aql (preservation of the intellect), which encourages innovation in resource management and environmental awareness. It is therefore imperative that public policies are devised in a manner that strikes a balance between enhancing the HDI and safeguarding the environment for collective benefit. This integration not only serves to promote social justice but also secures the sustainability of future generations, thereby aligning with the

[25] 'Abd al-Fattāḥ bin Muḥammad Miṣīlḥī, 'Jāmi' al-Masā'Il Wa al-Qawā'id Fī 'Ilm al-Uṣūl Wa al-Maqāṣid' (Misr: Dār al-Lu'lu'ah li al-Nayhr wa al-Tawzī', 2002).

[26] Nūr al-Dīn bin Mukhtār Al-Khādimī, *'Ilm al-Maqāṣid al-Syar'iyyah*, I (Maktabah al-'Abīkān, 2001).

[27] Aslati et al., "Utilizing Science and Maqāṣid Al-Sharī'ah in Resolving Contemporary Issues of Islamic Family Law."

objective of Sharia, which is to foster prosperity for all humanity.

CONCLUSION

From 2022 to 2023, the HDI and EPI showed a negative correlation. While improvements in education, health, and income lead to greater awareness of environmental sustainability, this finding aligns with the principles of Maqāṣid al-Shari'ah, which emphasize the protection of life, property, and progeny. Efforts to enhance human well-being and safeguard the environment are interrelated and contribute to sustainable development. This research shows that a balanced approach between economic growth and sustainable practices is needed to prevent environmental degradation. While economic growth is important for improving the HDI, development policies must integrate environmental considerations to ensure long-term sustainability. This implies that government policies should advance human development and environmental protection in a unified manner, fostering sustainable prosperity in line with *Maqāṣid al-Shari'ah* objectives. Further research could explore the causal relationship between HDI and EPI through longitudinal or experimental methods, identifying specific factors that mediate the relationship between human development and environmental sustainability.

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