The Nexus between Social, Environmental, Law, Governance Dimensions and Economic Development for Indonesian's SDGs Achievement

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ABSTRACT: This study aims to identify the nexus between social, environmental, legal, governance dimensions and the economic development in order to achieve SDGS in Indonesia. The research uses quantitative methods with the primary data in the form of the SDGS Achievement indicators obtained from the 2015 to 2022 Indonesia National Planning Agency and Central Bureau of Statistics. The data analysis techniques are SEM-PLS bootstrapping, with confidence interval of 5%. The results showed that social, environmental, legal and governance development have a positive influence on economic development towards the achievement of the Sustainable Development goals. All the results of the t-test exceed 1.96, the P Values, which denote the level of significance required, are below 0.05, and the adjusted R Square has the value of 0.888 (88.8%), which suggests that its capability to clarify the correlation between social, environmental, law, governance and the economic development variable is robust, with an 88.8% level of accuracy. The implication of this research that economic growth has brought about many benefits for Indonesia, also proved to have significant impacts on various aspects of society, including the environment, social structures, law, and governance. It is critical to note that policymakers and stakeholders work together to address these challenges and to ensure that the development is sustainable and equitable for all Indonesians.

INTRODUCTION

Indonesia is a country with not only the largest economy in Southeast Asia but also the fastest-growing economy in the world. Since 1980s, the growth of economy in Indonesia has been increasing rapidly, driven largely by its abundance in natural resources and its growing manufacturing industries (Damanhuri et al,, 2019). This growth has brought about significant changes in the country, including the improved infrastructure, a better access to healthcare and education, and the increased living standard. However, this growth has impacted negatively on certain aspects of society (Ergashev & Farxodjonova, 2020; Sioson, 2017).

Economic development is a critical component of sustainable development quality because it plays a crucial role in shaping the way societies utilize and manage their resources, and in determining the well-being of people within those societies (Dantas et al., 2021). Sustainable development requires the development of both inclusive and environmentally sustainable economy, which means that the economic growth must be balanced with the need to protect the natural resources and the environment (Hysa et al., 2020; Xavier et al., 2021).

Additionally, the development in economy contributes to the quality of sustainable development in a number of ways. Economic growth can help reduce poverty and increase access to resources such as food, shelter, and healthcare. This, in turn, helps improve the overall well-being of people in the society and promote the development in social aspect (Amar & Pratama, 2020).

On the contrary, the economic development can also lead to environmental degradation and unsustainable use of resources if it is not managed properly. Hence, the sustainable economic development is crucial - it seeks to balance the economic growth with the need to protect natural resources and to ensure that the long-term sustainability is adequately maintained. In fact, the sustainable economic development can be achieved through a variety of measures, such as investing in renewable energy, promoting energy efficiency, and reducing waste and pollution. By promoting sustainable economic development, we can ensure that economic growth is in balance with the protection to the environment and that the resources are used in a way beneficial to both current and future generations (Ndubisi et al., 2021).

Indonesia is home to some of the world's most prominent biodiversity ecosystems, including the tropical rainforests and the coral reefs. These ecosystems are essential for climate regulation, biodiversity, and the livelihoods of millions of Indonesians who rely on the environment for survival. Nevertheless, the rapid economic growth has led to deforestation, pollution, and other forms of environmental degradation (Zhang et al., 2022). This has had significant consequences, not only for the country's biodiversity and wildlife, but also for the livelihoods of people who are dependent on the environment in order to survive.

The loss of natural habitats where orangutans, tigers, elephants and other species live has also affected the decline of forest populations, since they are severely threatened by the habitat loss. In addition, the deforestation and the burning of peatlands cause significant amount of CO2 emissions, a contributive factor to a global climate change (Lamba et al., 2020; Palazzo et al., 2022).

A severe deterioration is prone to occur, in which the rapid expansion of industries and businesses has instigated the increasing number of corruption cases, an undeniable fact that the accountability of the government is weakening. This, undoubtedly, has resulted in challenges as to how the rules of law and the environmental protection measures are reinforced. In some cases, companies have exploited loopholes in regulations or have failed to comply with the environmental standards, leading to irreversible environmental damage (Murshed et al., 2021). To address these challenges, Indonesia has developed a range of policies and initiatives aimed at promoting sustainable development and addressing the negative impacts of economic growth (Dalevska et al., 2019).

These include programs to protect biodiversity, reduce greenhouse gas emissions, and improve social welfare. The government has also introduced measures to increase transparency and accountability, including the establishment of an anti-corruption commission (Syahza et al., 2020).

The Sustainable Development Goals (SDGs), incorporating 17 goals established by the United Nations in 2019, are commitments to be fulfilled, both within the scopes of global and national levels in order to improve the welfare of the society. These goals are (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reduced Inequalities, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice and Strong Institutions, and (17) Partnerships for the Goals.

In 2017, to simplify the implementation and monitoring, the 17 SDGs and their 169 targets are grouped into four pillars by the Indonesian Central Bureau of Statistics (BPS). The first pillar focuses on social development, including Goals 1, 2, 3, 4, and 5. The second pillar is centered on economic development, comprising Goals 7, 8, 9, 10, and 17. The third pillar focuses on environmental development, which covers Goals 6, 11, 12, 13, 14, and 15. Finally, the fourth pillar is concerned with legal and governance development, covering only Goal 16.

Based on the above background, it is necessary to identify the nexus between economic development and social, environmental, legal and governance aspects in order to achieve sustainable development goals in Indonesia.

METHOD

This study utilized a descriptive quantitative analysis research method to identify the nexus between social, environmental, legal and governance dimensions to economic development. The data used were in the form of official statistics consists of Indonesia SDGS achievement from 2015 to 2022. The data were obtained from The Indonesia National Planning Agency and Central Bureau of Statistics.

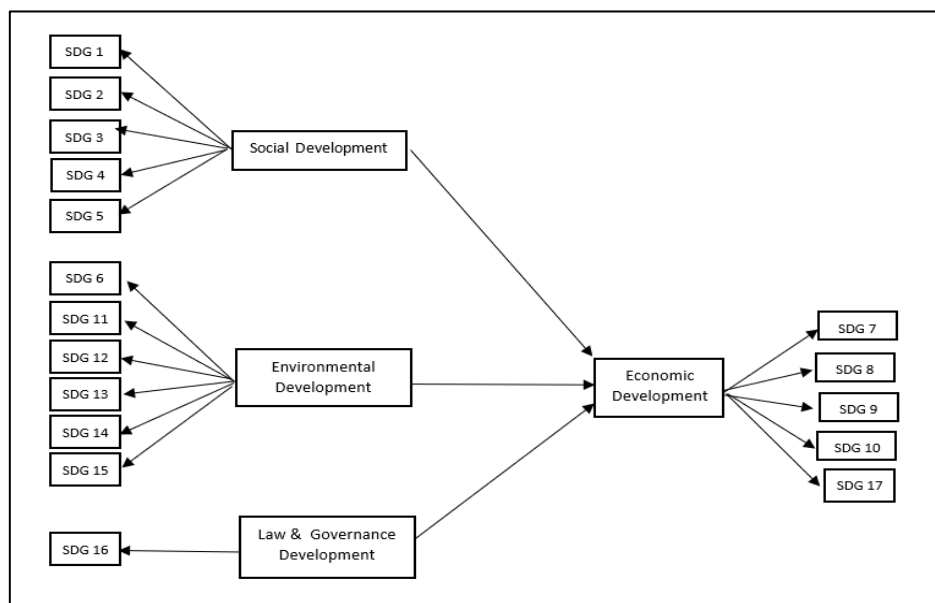This research used the model described in this figure.

Figure 1. Research Model

This research employed the Structural Equation Modeling (SEM) technique, specifically Partial Least Square (PLS) analysis, to study the complex relationships among the variables. This analysis was well-suited for the small sample size and non-normal distribution of data. The aim of the study was to examine the relationships between social, environmental, law, governance development and the economy. The findings could be useful for policymakers and stakeholders interested in promoting sustainable development in Indonesia by informing the development of effective policies and strategies. Thus, it gives a valuable contribution to the literature on sustainable development, particularly in the Indonesian context.

The steps involved in SEM-PLS are as follows :

- Developing a theoretical framework that outlines the relationships between the social, environmental, law, governance dimensions and the economic development in Indonesia. This framework will guide the development of the research questions and hypotheses.

- Defining the research question and hypotheses based on the theoretical framework tested further in this study. These questions and hypotheses should be clear, concise, and testable.

- Collecting secondary data relevant to the research question and hypotheses.

- Preparing other data that include the data cleaning, the checking of the missing values, and the transforming of the data if necessary.

- Using model specification to test the research hypotheses. This model will be based on the theoretical framework developed in step 1. This Sem PLS model research is presented in Figure 2.

- Giving assessment for models measurement of each construct. This involves checking for reliability and validity of the measurement scales used.

- Making assessment for structural model that involves examining the strength and significance of the relationships between the constructs in the model.
- Interpreting the results of the analysis and drawing conclusions based on the findings.
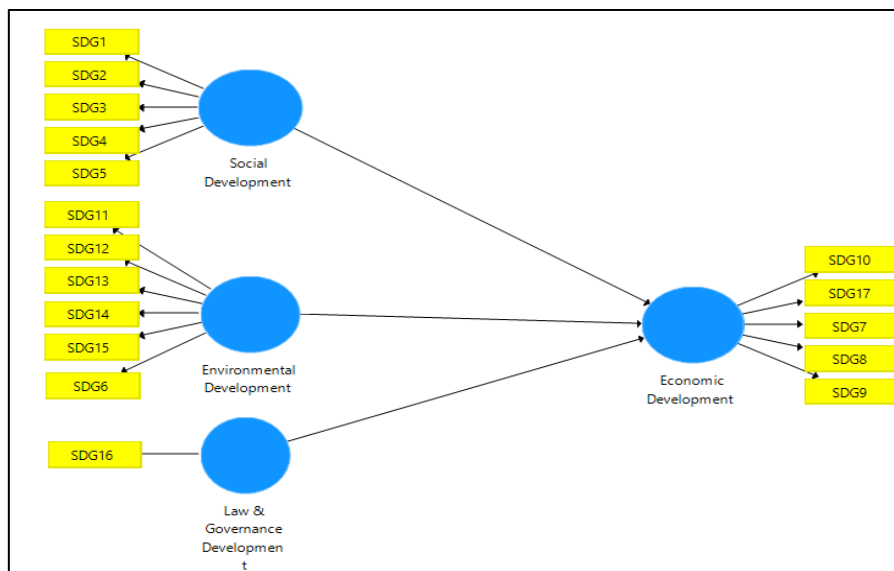

Figure 2. Research SEM-PLS Model

RESULTS AND DISCUSSIONS

Data Obtained

The SDGS achievement data processed in this study are described in the following table:

Table 1. Indonesia's SDGS Achievement (2015-2022)

	2015	2016	2017	2018	2019	2020	2021	2022
SDG1	28.14	43.66	43.03	62.76	48.92	66.32	58.93	58.20
SDG2	4,577,485	4,917,037	5,530,015	5,524,771	6,308,516	6,149,062	6,744,482	8,257,379
SDG3	247.67	265.16	282.34	299.97	316.98	334.92	391.19	426.67
SDG4	51.98	52.71	53.43	54.16	54.89	55.55	56.23	57.07
SDG5	23.65	24.00	24.78	25.58	26.04	26.37	26.69	27.01
SDG6	62.55	64.70	68.43	70.90	71.47	72.22	72.84	73.61
SDG7	50.20	52.15	54.41	55.55	56.59	57.79	58.81	59.82
SDG8	19,728,93	20,338,439	20,837,601	23,344,258	21,769,322	20,194,076	18,619,255	17,044,433
SDG9	2,700,985	2,806,444	2,930,018	3,207,957	3,120,048	2,927,308	2,818,491	2,811,615
SDG10	2,073.22	2,131.97	2,191.40	2,250.63	2,308.51	1,972.25	1,812.37	1,654.02
SDG11	34.20	34.42	36.37	36.50	39.76	40.69	39.03	40.70
SDG12	1,027.33	999.67	1,059.67	971.67	1,102.67	1,088.67	1,167.00	1,290.11
SDG13	604.88	353.75	358.93	433.69	484.83	295.13	399.30	388.03
SDG14	56.27	57.79	59.48	61.35	60.93	61.20	63.86	66.51
SDG15	36.06	39.98	41.91	34.82	46.89	38.59	33.79	28.99
SDG16	72.11	73.88	77.85	121.97	98.64	81.51	100.97	92.79
SDG17	28.36	29.48	33.39	37.26	41.62	28.37	37.22	40.18

Source : Prepare By Author,2023

Results of Measurement Model Analysis (Outer Loading)

The measurement model analysis consists of four stages of testing comprising individual items on reliability, internal consistency reliability, average variance extracted, and discriminant validity.

Individual Item Reliability Test

The individual item reliability test is the first stage of the analysis, which involves evaluating the standardized loading factor of each indicator measurement item and its corresponding latent variable. A loading factor value above 0.6 is considered valid and indicates that the measurement item is an appropriate indicator of the latent variable. Table 2 presents the results of this test.

Table 2.
Loading Factor Test Results

	Economic Development	Environmental Development	Law & Governance Development	Social Development
SDG1				0.766
SDG10	0.919			
SDG11		0.934		
SDG12		0.496*)		
SDG13		0.280*)		
SDG14		0.922		
SDG15		-0.218*)		
SDG16			1.000	
SDG17	0.769			
SDG2				0.824
SDG3				0.812
SDG4				0.987
SDG5				0.969
SDG6		0.984		
SDG7	0.953			
SDG8	0.942			
SDG9	0.974			

Source: PLS Output, 2023

The findings on the outer loading factor test imply that it is apparent there are three indicators with values fall below the threshold of 0.50. As a result, these indicators, namely SDG12 (0.496), SDG13 (0.280), and SDG15 (-0.218), must be removed from the model as they are unable to contribute to the existing variables. Therefore, the subsequent test is conducted without incorporating these excluded indicators.

Discriminant Validity Test

The Discriminant Validity Test is conducted by examining the cross loading value and comparing it with the AVE root value. The cross loading size is determined by comparing the correlation among the indicator, its construct and the other blocks, which indicate that the construct is a better predictor of the size of its block than other blocks. Table 3 displays the results of this test.

Table 3.
Cross Loading Validity Results

	Economic Development	Environmental Development	Law & Governance Development	Social Development	Conclusion
SDG7	0.966				Valid
SDG8	0.965				Valid
SDG9	0.969				Valid
SDG10	0.923				Valid
SDG17	0.774				Valid
SDG6		0.974			Valid
SDG11		0.915			Valid
SDG14		0.949			Valid
SDG16			1.000		Valid
SDG1				0.770	Valid
SDG2				0.822	Valid
SDG3				0.808	Valid
SDG4				0.986	Valid
SDG5				0.969	Valid

Source: PLS Output, 2023

Table 4
Discriminant Validity Test Results

	Economic Development	Environment Development	Law & Governance Development	Social Development
Economic Development	0.956			
Environmental Development	0.906	0.966		
Law & Governance Development	0.894	0.903	1.000	
Social Development	0.912	0.876	0.809	0.940

Source: PLS Output, 2023

Table 4 demonstrates the loading value within the specific construct which is higher than the loading value within other constructs, indicating that there is no issue with testing discriminant validity.

Internal Consistency Reliability Test
The Internal Consistency Reliability Test involves utilizing a Composite Reliability (CR) value with a threshold of 0.7. Unlike Cronbach's alpha, CR is more suitable for evaluating internal consistency in SEM models since it does not assume that all indicators are identical in a variable. Test results can be seen in Table 5.

Table 5.
Composite Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability
Economic Development	0.968	0.975	0.977

Environmental Development	0.926	0.946	0.948
Law & Governance Development	1.000	1.000	1.000
Social Development	0.968	0.975	0.977

Source : Data Processed, 2023

Table 5 indicates that all CR values exceed 0.7, which suggests that there are no concerns in conducting internal consistency reliability tests.

Average Variance Extracted (AVE)

The subsequent test involves examining the Average Variance Extracted (AVE) value, which describes the amount of variance or heterogeneity of manifest variables encompassed by latent variables. A minimum AVE value of 0.5 is considered a reliable indicator of convergent validity. The results of this test are displayed in Table 6.

Table 6.
Average Variance Extracted Test Result

	Average Variance Extracted (AVE)
Economic Development	0.914
Environmental Development	0.821
Law & Government Development	1.000
Social Development	0.767
Sustainable Development Quality	0.914

Source : Data Processed, 2023

Table 6 indicates that none of the AVE values fall below 0.5, this implies that there are no issues in conducting the Average Variance Extracted test.

Results of Structural Model Analysis (Inner Model)

Several stages of testing were conducted in this analysis, namely path coefficient (β), coefficient of determination (R^2), and t-test with the bootstrapping method.

Path Coefficient (β)

This test involves determining whether a path in the model has an influence by comparing its threshold value with 0.1. A path is considered significant if its threshold value exceeds 0.1. The results of the path coefficient are displayed in Table 7, where three significant paths are identified.

Tabel 7.
Path Coefficient

	Economic Development
Environmental Development	0.135
Law & Governance Development	0.184
Social Development	0.765

Source : PLS Output, 2023

Table 7 displays four significant pathways, aligning the three hypotheses proposed in the study. All of the pathways have threshold values greater than 0.1, indicating that each pathway has an impact on the model.

Coefficient of Determination (R²)

This test is conducted to explicate the variance of each endogenous target variables (endogenous variables are variables influenced by other variables in the model) with the measurement standards of roughly 0.670 indicating a strong relationship, 0.333 representing a moderate relationship, and 0.190 or below indicating a weak relationship. The measurement results are presented in Table 8.

Tabel 8.
Path Coefficient

	R Square	R Square Adjusted
Economic Development	0.936	0.888

Source : PLS Output, 2023

The aforementioned results indicate that the variable being utilized has an R Square Adjusted value of 0.888 (88.8%), which suggests that its capability to clarify the correlation between social, environmental, law, governance and the economic development variable is robust, with an 88.8% level of accuracy.

T-test

To test the hypotheses proposed in this study, a two-tailed test was performed using the bootstrapping method with a significance level of P Values 0.05 (5%). The hypotheses will be validated if they have a t-test value exceeding 1.96 and P Values below 0.05. The t-test outcomes are presented in Table 9.

Table 9.
T-test Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Environmental Development -> Economic Development	1.004	1.008	0.016	61.126	**0.000**
Law & Governance Development -> Economic Development	0.906	0.909	0.064	14.259	**0.000**
Social Development -> Economic Development	1.016	1.021	0.027	37.775	**0.000**

Source : Data Process, 2023

The results of the t-test reveal that the t-test value exceeds 1.96, and the P Values, which denote the level of significance required, are below 0.05.

Hypothesis Testing

H₁   :   Social Development Has a Significant Effect on Economic Development

Social development has a significant effect on economic development because the results of the t-test reveal that the value exceeds 1.96, and the P Values, which denote the level of significance required, are below 0.05.   Social development creates the necessary conditions for economic growth to take place. A well-educated and healthy population is more productive, innovative, and contributing to the economy than an uneducated and unhealthy population. Moreover, social development promotes gender equality and social justice, which can help reduce poverty and inequality, leading to a more stable and prosperous society. In contrast, when social development is prioritized, it can help create more inclusive and equitable societies that provide opportunities for all people to thrive (Lee, 2020). Investing in education and healthcare can lead to a more productive workforce, while promoting gender equality can help to empower women and reduce poverty (Roy & Xiaoling, 2022).   Social development and economic development are closely intertwined and have a reciprocal relationship (Smith & Hart, 2022).

Economic development itself refers to the growth and improvement of the economy of a country or region (Luna-Nemecio et al., 2020). Economic development has also affected social structures in Indonesia (Prasetyo & Kistanti, 2020).   While it has brought about many positive changes and improvements in living standards, it has also widened the gap between the rich and the poor, leading to a greater inequality. This has created social unrest and political instability, particularly in rural areas where poverty rates remain high. Women, children, and marginalized communities are disproportionately affected by the impacts of economic development, with many working in hazardous conditions for low wages.

Investing in social development can also lead to an increased entrepreneurship and innovation, which are essential drives for the economic growth. A society that values and invests in education, research, development, and technology is more likely to have a competitive edge in the global marketplace. Additionally, social development measures can promote greater political stability, which can help create a favorable environment for economic growth. Social development contributes to sustainable economic development by promoting environmentally friendly policies and practices, hence, investing in renewable energy and sustainable agriculture creates not only new economic opportunities but also the protection of the environment for future generations.

H₂   :   Environmental Development Has a Significant Effect on Economic Development

Environmental development has a significant effect on economic development because the results of the t-test reveal that the t-test value exceeds 1.96, and the P Values, which denote the level of significance required, are below 0.05. Environmental development is a critical component of sustainable development quality because it is closely linked to the well-being of the people and the planet (Fonseca et al., 2020). Environmental development means ensuring that natural resources and ecosystems are used and managed in a way that meets the needs of the present without compromising the ability of future generations to fulfil their own needs (Khan et al., 2019).

Economic development depends on the availability of natural resources and a healthy environment to support economic activities. Therefore, environmental degradation can hinder economic development, while environmental conservation and sustainable management can facilitate it. Some of the reasons why environmental development has a significant effect on economic development were :

- Natural resource availability: Natural resources such as water, forests, minerals, and oil are essential for economic development. Economic activities such as agriculture, manufacturing, and energy production depend heavily on these resources. The availability of these resources in sustainable quantities is critical for sustainable economic development.

- Tourism: Tourism is a significant contributor to the economic development in many countries. Tourists are attracted to areas with natural beauty, wildlife, and cultural heritage sites. Therefore, environmental conservation and sustainable management can promote tourism, and this leads to the economic growth.

- Climate change: Climate change poses significant risks to economic development. Climate change can result in natural disasters such as floods, droughts, and hurricanes, which can destroy infrastructure and disrupt economic activities. Environmental conservation and sustainable management can mitigate climate change, reducing the risks associated with it. Environmental degradation can lead to soil erosion, water scarcity, and pollution, which can undermine efforts to achieve sustainable development (Hirons, 2020). Hence, environmental sustainability is essential for addressing global challenges such as climate change which can have far-reaching consequences for the people well-being and the sustainability of ecosystems (Pecl et al., 2017). Climate change is caused by the accumulation of greenhouse gases in the atmosphere, primarily from the burning of fossil fuels. It is a global problem that requires a global response, and addressing it will require a coordinated effort to reduce emissions and promote sustainable development (Harangozo et al., 2018)

- Health: Environmental degradation can lead to the spread of diseases such as malaria, cholera, and typhoid, which can have a severe impact on economic development. Environmental development measures such as access to clean water and proper sanitation can reduce the spread of diseases, leading to a healthier population and a more productive workforce.

- Resource efficiency: Environmental development measures such as recycling, energy efficiency, and waste reduction can promote resource efficiency, leading to cost savings for businesses and households.

Environmental development provides the natural resources and healthy environment necessary for economic activities. Environmental conservation and sustainable management can promote economic growth through tourism, climate change mitigation, disease reduction, resource efficiency, and other contributing factors. Therefore, it is essential to prioritize environmental development alongside with the economic development to ensure the long-term sustainability and prosperity. This means that the economic growth must be in balance with the needs to protect natural resources and the environment, and that economic development should not come at the expense of environmental sustainability (Ahmad et al., 2021)

H₃ : Law and Governance Development Has a Significant Effect on Economic Development.

Law and governance development has a significant effect on economic development because the results of the t-test reveal that the t-test value exceeds 1.96, and the P Values, which denote the level of significance required, are below 0.05. Environmental development create an enabling environment for businesses to operate and for individuals to engage in economic activities and the framework for how societies manage and use their resources, and how they make decisions that impact the well-being of people and the planet (Vries & Petersen, 2009). A well-functioning legal and governance system can provide the necessary stability and predictability for businesses to invest and create jobs. Good governance and effective legal systems are essential for achieving sustainable development because they ensure that resources are managed feasibly, and that the needs of all members of society are taken into account (Raco, 2005). Nevertheless, good governance and effective legal systems are critical for addressing global challenges such as climate change, thus, they require coordinated efforts and international cooperation (Scherer & Voegtlin, 2020). Effective governance structures and legal frameworks can help facilitate the cooperation and ensure that resources are used in a way benefiting all members of society and protecting the planet for future generations (Warner, 2010).

Law and goverrnance development have a significant effect on economic development, (Mc Lennan & Ngoma, 2004) on the grounds of the following :

- Protection of property rights: A well-functioning legal system protects property rights, which are crucial for economic development. Property rights provide incentives for individuals and businesses to invest in and to develop property, which will lead to economic growth.
- Contract enforcement: Contract enforcement is essential for economic development. Businesses and individuals rely on contracts of agreements and on an engagement in economic activities. A well-functioning legal system provides a framework for contract enforcement, ensuring that agreements are honored, and disputes are resolved in a fair and efficient manner.
- Regulatory environment: A sound legal and governance system can create a favorable regulatory environment for businesses to operate. Appropriate regulations can protect public health and safety, promote competition, and prevent market failures, Thus, these improved conditions will lead efficient economic activities.
- Corruption: Corruption is a significant barrier to economic development. It distorts the allocation of resources and undermines the rule of law. A well-functioning legal and governance system can combat corruption by creating transparency, accountability, and oversight mechanisms.
- Political stability: Political stability is essential for economic development. A stable political environment provides predictability and certainty for businesses to invest and to create jobs. A well-functioning governance system can ensure political stability by providing transparent and accountable institutions and processes.

Law and governance development create an enabling environment for businesses to operate and for individuals to engage in economic activities. By protecting property rights, enforcing contracts, providing a favorable regulatory environment, combating corruption, and ensuring political

stability, law and governance development can promote economic growth and prosperity. Good governance and effective legal systems are essential for ensuring that economic development is sustainable over the long term (Rahmani & Mirzadeh Koohshahi, 2013). This means that the economic growth must be balanced with the needs to protect the natural resources and the environment, and that the economic development should not occur at the expense of environmental sustainability.

CONCLUSIONS

The nexus between social, environmental, law, governance development and the economic development were as follows : (1) All the results of the t-test exceeds 1.96, and the P Values, which denote the level of significance required, are below 0.05, and R Square Adjusted has value of 0.888 (88.8%), which suggests that its capability to clarify the correlation between social, environmental, law, governance and the economic development variable is robust, with an 88.8% level of accuracy. (2) Social development has significant impact to economic development on the grounds that it creates the conditions necessary for sustainable economic growth to take place. By investing in education, healthcare, human rights, and other social welfare measures, countries can promote greater productivity, innovation, and social justice, leading to a more prosperous and stable society, (3) Environmental development has significant impact to the economic development because it provides the natural resources and healthy environment necessary for economic activities. Environmental conservation and sustainable management can promote economic growth through tourism, climate change mitigation, disease reduction, resource efficiency, and other contributing factors. Therefore, it is essential to prioritize environmental development alongside the economic development to ensure long-term sustainability and prosperity, and (4) Law and governance development has a significant impact to the economic development because they create an enabling environment for businesses to operate and for individuals to engage in economic activities. To sum up, by protecting property rights, enforcing contracts, providing a favorable regulatory environment, combating corruption, and ensuring political stability, law and governance development can promote economic growth and prosperity.

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