-RESEARCH ARTICLE-

EXAMINING THE IMPACTS OF DEMOCRACY ON THE ECONOMIC GROWTH OF ASEAN COUNTRIES AIMED COVID-19: A PANEL DATA ANALYSIS

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─Abstract─

 Covid-19 has impacted the ASEAN nations' economic expansion as of late 2021. Any nation's democratically elected government is tasked with defending its citizens' economic rights. Due to this pandemic, people expect more from the government to provide the best food, medical services, and economic stability. This study investigates how democracy has affected the economic development of ASEAN nations during the COVID-19 epidemic. The results of this study show that democratic governments in ASEAN nations had significant difficulties in containing a pandemic's negative economic effects. This study adds crucial information to the body of literature explaining how democratic governments contribute to the stability and economic success of the ASEAN member states. Using a panel of 10 ASEAN nations as subjects, this article examines the relationship between democratic government and economic growth from

2000–2022. Our key conclusions can be summed up as follows: First, we find that, for four different metrics of democracy, the influence of democracy on economic development is unfavorable and statistically significant. This result holds for all four metrics. Second, the same outcome was found when the GMM system was examined. The theoretical ramifications of this study would investigate a novel theory explaining the connection between democratically elected governments and potential pandemics in the future. Additionally, the useful ramifications of this study would offer a blueprint for future policy creation to address crucial pandemic-related challenges.

Keywords. Good governance, corruption, economic growth, democracy, public service

1. INTRODUCTION

Every nation in the globe has changed its traditional methods of government due to COVID-19 (Habibi, 2021; Weerasombat et al., 2022). Due to this pandemic, people expect more from the government to provide the greatest food and medical services (Khamken et al., 2021). Likewise, several governments responded to this pandemic in various ways (Montes et al., 2020). To maintain economic growth during the epidemic, democratic nations like America and Canada handled the pandemic issue democratically (Pongsakornrungsilp et al., 2021). Otherwise, the monarchies in Saudi Arabia and other Gulf nations tackle this pandemic differently (Otwong et al., 2021). But in the ASEAN nations, democracy was crucial to controlling the public's governance affairs (Suttipun et al., 2020). Although this epidemic has seriously hampered the economic growth of various countries, effective governance has kept the economy from spiraling into a crisis (Chanthawong et al., 2020; Suttipun et al., 2020).

Because citizens elect the government to manage governance concerns in the best possible manner, good governance is a crucial component of democratic government (Kalyanamitra et al., 2018). The Thai people also suffered significant difficulties, but the government assisted them in managing their problems (Stange et al., 2020; Weerasombat et al., 2022). The epidemic that began in Thailand impacted its economic development because trade was halted due to closed international borders (Khamsuk et al., 2021; Kitchanapaibul et al., 2022; Pholphirul et al., 2022). Similar to how the economies of ASEAN nations were impacted by COVID-19, a fall in exports and imports was seen (Pholphirul et al., 2022; Suwannarong et al., 2022). The official indicator states that the pandemic caused Thailand's economic growth to stop (Chuaypen et al., 2022; Moallef et al., 2022; Tanantong et al., 2022). To work together to sustain economic growth in 2021, the Thai government brought together various economic players (Chuaypen et al., 2022). The focus on economic growth is inevitable because the democratically elected government is accountable to the people for its governance (Ditta-Apichai et al., 2020; Kokkhangplu et al., 2022; Montes et al., 2020).

The Thai government's role in providing medical assistance to the populace during the pandemic was covered in earlier studies on Covid-19 and good governance (Ditta-

Apichai et al., 2020; Kokkhangplu et al., 2022; Montes et al., 2020). Similarly, Papwijitsil et al. report from 2021 explored the pandemic's effects on Thailand's food supply and the government's involvement. Puntub et al. (2022) explained to the populace how the government interfered with relief efforts. The earlier literature also explained Thailand's and other ASEAN nations' economic circumstances. These investigations undoubtedly added valuable details about the function of COVID-19 to the literature, giving a deeper understanding of the connection between the pandemic and economic expansion. However, the literature on the contribution of democracy to the economic development of various nations is lacking. The goal of this study was to fill in this informational gap by providing in-depth details regarding how the governments of the ASEAN member states handled pandemic-related issues in COVID-19.

This study investigates how democracy has affected the economic development of ASEAN nations during the COVID-19 epidemic. Additionally, a primary goal of this study is to evaluate how well democratic governments handle challenges like these pandemics. The findings of this study will add more significant information to the body of literature describing how democratic government contributes to national stability and economic progress. Additionally, by connecting the findings of this study with prior research on economic growth, the untapped area of research by this study would strengthen the theory in the literature. To improve the economic situation of ASEAN countries, this study aimed to clarify the more important information regarding the democratic government and the governance structure during COVID-19. Therefore, the theoretical and practical ramifications of this study would examine the new understanding elucidating the connection between the democratically elected government and upcoming unfortunate pandemics. Additionally, the useful ramifications of this study would offer a blueprint for future policy creation to address crucial pandemic-related challenges.

2.   LITERATURE REVIEW

The government's duty during the COVID-19 pandemic was to safeguard the populace and give them medical and financial help (Puntub et al., 2022; Yohmad et al., 2022). According to its capacity for planning, each nation's government has contributed significantly in this area (Sampantamit et al., 2020; Wahdaniyah et al., 2021). In the case of ASEAN nations, these nations' governments also offered help to the populace (Charoenwat et al., 2022; Numpong et al., 2022; Thumronglaohapun et al., 2022). Indeed, the ASEAN countries' economic growth slowed, just like other nations in the world (Paiboonvong et al., 2022; Wattanawong et al., 2021). With the assistance of stakeholders, the government took on a new role in maintaining economic growth (Pisitsankkhakarn et al., 2020; Thaothampitak et al., 2022). The central government of Brunei sought to maintain the nation's economic situation despite the unstable nature of its economic growth (Papwijitsil et al., 2021; Pattanakuhar et al., 2022). Because of the government's proactive actions during COVID-19, trading was prohibited across

international borders (Barua et al., 2020; Chanthawong et al., 2020; Sapbamrer et al., 2022). The Brunei Sultan strived to advance the nation's economy to achieve sustainable development (Nakasu et al., 2022; Otwong et al., 2021; Suttipun et al., 2020). In Singapore, the legislative government controlled the nation's economic situation during COVID-19 to shield the populace from inflation (Kokkhangplu et al., 2022; Nakasu et al., 2022; Pongsakornrungsilp et al., 2021). To help the nation's economy, the Singaporean government announced various trade measures throughout the latter half of 2020 and the beginning of 2021. (Chuaypen et al., 2022; Ditta-Apichai et al., 2020; Montes et al., 2020).

The figures for 2019 in Singapore showed a 1% drop in GDP (Sampantamit et al., 2020). Because ASEAN countries enjoy sustainable economic growth, democratic administration is essential to preventing the economy from contracting (Numpong et al., 2022). The economic growth of Singapore did not lag behind that of the other ASEAN nations (Wattanawong et al., 2021). The political leadership put a lot of effort into collaborating with other parties to manage the rising inflation throughout the pandemic's initial wave (Pattanakuhar et al., 2022). However, due to the limits on market access and the lockdown, Singapore's GDP contracted by 13.2%. (Nakasu et al., 2022). Even in open markets, any nation's government significantly impacts economic activity (Charoenwat et al., 2022). Additionally, competent administration can help any nation maintain its economic progress (Wattanawong et al., 2021). Additionally, the Singaporean government found it difficult to deal with timely, accurate assessments due to the country's negative GDP growth rate (Chuaypen et al., 2022). Because of this, anyone involved in economic growth must be aware of the government's enormous impact on it (Chuaypen et al., 2022).

Malaysia's GDP growth rate in 2020 was between 4% and 4%. (Abdar et al., 2021). Due to the COVID-19 pandemic, growth reduced in the first month of 2020 from 3.6% to 0.7%. (Weerasombat et al., 2022). The second period's gross domestic product figures were revised and dropped to 18%. (Ditta-Apichai et al., 2020). Additionally, in the first half of 2020, Malaysia's unemployment rate grew slightly from 3.2% to 3.5% while mostly remaining stable (Suwannarong et al., 2022). The unemployment rate climbed significantly in the second period, reaching a peak of 5.1% after increasing by more than 40% overall (Tancho et al., 2020). Given the time it takes for the financial effects of a pandemic to be reflected in the jobless ratio, Malaysia may see a more catastrophic loss of jobs if the COVID-19 epidemic is not contained (Montes et al., 2020). In addition, the Philippines' economic growth abruptly decreased from 0.7% in the first half to 6.7% in the second and then further in the third to 16.5%. (Kitchanapaibul et al., 2022). The Philippines is the only member of ASEAN that is thousands of kilometers distant, which hurts the quantity of intra-member commerce. In contrast, several ASEAN countries are relatively connected, making intra-member commerce easier (Kokkhangplu et al., 2022; Nakasu et al., 2022; Pongsakornrungsilp et al., 2021). Additionally, the Philippines'

productivity fell, which may have resulted from a reduction in foreign payments (Paiboonvong et al., 2022). The Philippines expels a substantial portion of its workforce, and the money they send home is crucial to the country's economy (Suttipun et al., 2020).

Thailand's economy, the largest in the world regarding regional production, is also one of the ASEAN economies most adversely affected by COVID-19. Thailand, fortunately, has fewer pandemic instances than other nations (Numpong et al., 2022). In January 2019, Thailand's economy grew at a rate of roughly 2.5%. In the last month of 2019, the number fell to 1.5 percent (Charoenwat et al., 2022; Numpong et al., 2022). Since Thailand's real GDP growth decreased by more than 2.0% in the second half of 2020, it became one of the only ASEAN countries with poorer economic growth. The percentage decreased further in the next period to 12.2%. (Paiboonvong et al., 2022; Wattanawong et al., 2021). In the first half of 2020, the unemployment rate grew slightly from 1% to 1.1%, but it stayed at a very low concentration (Pisitsankkhakarn et al., 2020; Thaothampitak et al., 2022). Indonesia, the largest country in ASEAN, has the highest GDP of any member state due to its massive population (Papwijitsil et al., 2021; Pisitsankkhakarn et al., 2020). Indonesia's economy shrank by 4.97% during the pandemic, falling to 2.97% in the first half of 2020. (Chanthawong et al., 2020; Sapbamrer et al., 2022). The effect is obvious even if the proportion is still high (2.97%). The second period exhibited a more pronounced decline as the GDP expansion rate abruptly fell to -5.32%. (Sampantamit et al., 2020; Tancho et al., 2020). Indonesia's unemployment rate varies from 4.99% to 5.34% compared to several other ASEAN countries, creating a very unpredictable situation (Stange et al., 2020; Weerasombat et al., 2022). It's interesting to note that Indonesia's unemployment rate decreased from 5.28% to 4.99% throughout the first month. (Khamken et al., 2021; Khamsuk et al., 2021; Kitchanapaibul et al., 2022).

In contrast to the four countries mentioned above, Vietnam's virus outbreak is mild (Thumronglaohapun et al., 2022). By September 2020, there will have been 0.33 fatalities per 1,000,000 persons and around 0.0011% of attacks (Sampantamit et al., 2020). Vietnam, a third-world country, saw its GDP grow by almost 8% in 2020. Vietnam has been able to maintain positive production growth as a result of its earlier rapid GDP expansion. Its economic growth in the first half of 2020 was only 0.36%, which is incredibly close to zero but still positive. Vietnam's economy may likely contract at the end of the final phase, even if COVID-19's future course remains uncertain (Nakasu et al., 2022; Otwong et al., 2021). The government of any nation can boost the economy by taking sensible measures in the event of a pandemic or other natural disaster.

Model Specifications

Based on the underlying issues and existing literature, the study has proposed the following models

$$GDPG_{it} = \alpha_0 + \alpha_1 NS_{it} + \alpha_2 DME_{it} + \alpha_3 IAID_{it} + \alpha_4 INFL_{it} + \alpha_5 POLT_{it}$$
$$+ \varepsilon_{it} \dots \dots \dots \dots \quad (1)$$

Where,

NS	:	Gross national savings as the percentage of GDP
IPC	:	income per capita which is measured as GDP per capita
GDPG	:	Annual growth in GDP
IAID	:	Inflation-adjusted Interest Rate
INFL	:	Consumer price index
POLT	:	Captured by political instability index
DEM	:	Democracy index score

3. METHODOLOGY

This study analyzes the relationship between economic development and the degree of democratic practices in ASEAN member countries using panel estimates. The panel estimate technique has been found to be an appropriate choice for usage in this situation because it only includes ASEAN member countries in its population sample. This method tackles the issue by providing panel data that correct for unobserved variability, as indicated in Baltagi et al. (2005) 's arguments in favor of panel data analysis. This plan of action was created to deal with the problem. When a cross-sectional dataset is used incorrectly, bias may result. Our approach, however, absolutely eliminates the likelihood of this happening. It could be challenging to separate the various interrelated dynamics in panel data while conducting research utilizing cross-sectional data. Panel data is a very helpful resource because it delivers a lot of information and different observations. Two distinct groups of variables are less likely to be excessively similar when using panel data. Additionally, it provides more degrees of freedom, displays more variety, and improves the value of time series.

This study utilized panel estimates to make it easier to develop ASEAN-specific savings models. The Two-Stage Least Squares Instrumental Variables and the Panel-Corrected Standard Errors are two examples of these approaches. If Bell et al. (2015)' assertions are accurate, In cross-sectional data derived from time series, heteroscedasticity, autocorrelated errors, and contemporaneous correlations are frequently observed. The idea of contemporaneous correlations is related to this. Cross-sectional data errors are typical of the heteroscedastic variety, but time series data frequently exhibit high autocorrelation. As a result, any conclusions drawn from the results of ordinary least squares would result in incorrect standard errors. According to several publications, the Generalized Least Squares (GLS) method potentially outperforms the Ordinary Least Squares approach (OLS). Using the GLS methodology in clinical settings is difficult since the researcher must have prior knowledge of heteroscedasticity and autocorrelation (Bell et al., 2015). This leads to considering the feasible generalized least squares method

as a potential substitute. When the sample size is small, and T is significantly greater than the number of cross-sectional units, FGLS seeks to minimize the discrepancy between estimations (N).

Bell et al. (2015) and other academics have recommended utilizing the Panel Corrected Standard Errors (PCSE) technique to analyze time series cross-section data. This is because this method creates reliable covariance estimators, which could be useful in overcoming issues of this nature. Compared to FGLS, PCSE can provide better performance results without requiring a larger T than N. This results from the more effective algorithm used by PCSE (Jönsson et al., 2005). Additionally, it performs any required corrections for anomalies caused by spherical imperfections, allowing for more reliable conclusions to be reached from TSCS computations. Recent research has used both the panel-corrected standard error approach and the regression analysis, which at first look appear to have nothing to do with one another (Nistor et al., 2018; Silaghi et al., 2011).

A growing number of experts think that the trend toward higher incomes and living standards is mostly driven by an increase in the percentage of people who save their money. This school of thought contends that increases in income and living standards do not always translate into an increase in people's desire to save money. This leads to inaccurate estimates of the coefficient values based on OLS. The linear regression model presupposes that the error term and the control variables have no relationship when there is a relationship between the variables that can be characterized as a cause-and-effect dynamic. When variables are connected with error terms resulting from an estimate, it is challenging to separate the impact of certain components on cost reductions. Because of this, judging the estimation's accuracy is challenging. Estimating always causes the model's variables and error terms to be linked. The Two-Stage Least Squares method, which examines the relationship between the variables, can be used to discover a resolution to this problem. This method aids in the identification of endogenous variables that are closely related to the error term but not the other way around. An error term is one of the kinds of variables that can be found using this technique. The error term is the only endogenous variable that lacks the relationship mentioned above. Finding the right resources for resolving endogeneity while accounting for delayed values of independent variables has been predicted to be challenging. To assess the effectiveness of the savings approach, we employed lagged income growth and income indicators. We had access to these tools. In evaluating saving models being carried out as part of the current study, income growth and per capita income are used with a one-period lag. This research, which was covered in the paragraph before, employed this methodology.

There is a pleasant and unexpected twist when using White's approach to handle heteroscedasticity. Endogeneity is not a problem for estimating the correlations between variables because the results of the OLS and TSLS estimations showed no simultaneous relationship between income growth and per capita income. Endogeneity is, therefore,

not regarded as a major problem. A series of tests are also run to determine which of the three—RES, FE, and OLS—is the best choice. The Ordinary Least Squares (OLS) method is based on the premise that cross-sectional data for a given period cannot be used to infer any time-specific effects. The foundational idea around which the OLS approach is built is this. However, OLS estimators should not be used to forecast units using cross-sectional data for a certain period because these effects persist throughout the estimation process. A Hausman test was then run to examine whether or not the RE technique is accurate compared to the FE estimate and whether or not it is reliable and respectable. The null hypothesis, according to which estimates derived from time series cross-sectional data do not include any effects, was tested using a FE test in parallel. The estimations obtained by the RE model and those produced by the FE model do not differ statistically significantly, according to the experiment's findings that tested the null hypothesis. It may be demonstrated that FE estimates are superior and more accurate than RE estimates if the null hypothesis, Ho, is accepted. On the other hand, it can be demonstrated that the opposite is true and that RE estimates are more accurate if Ho is rejected.

4. ANALYSIS

4.1 Correlation Tests

The results of the correlation analyses for the variables are shown in Table 1. The correlation coefficient demonstrates that there is a significant relationship between all of the variables that were investigated in this research.

Table 1. Correlation Analysis

		1	2	3	4	5	6	7
NS	**1**	1						
IPC	**2**	-0.1280	1					
GDPG	**3**	-0.1237	0.1233	1				
IAID	**4**	-0.1813	0.1298	0.8029	1			
INFL	**5**	0.1256	-0.4293	0.1779	0.1579	1		
POLT	**6**	0.1328	-0.2247	-0.7728	-0.2374	0.1882	1	
DEM	**7**	-0.1720	0.2104	-0.1226	-0.2935	-0.1191	-0.2920	1

4.2 Regression Results

Table 1 explains the regression results of model 1, which explains how democracy affects the ASEAN countries' economic growth. The study's results are consistent with those of earlier studies. The economic expansion of ASEAN nations seems to have a positive but significant relationship with democracy.

Table 2. Regression Results of Model 1

Dependent Variable:NS	Fixed Effect Coefficient (p-value)	Random Effect Coefficient (p-value)	GMM Coefficient (p-value)
GDPG(t-1)			2.311***
			(0.000)
DEM	0.0127***	0.1271	0.1339***
	(0.000)	(0.125)	(0.000)
NS	0.1218***	0.0083	0.1140***
	(0.000)	(0.715)	(0.000)
IAID	-0.1004***	-0.0220	-0.2452***
	(0.000)	(0.281)	(0.000)
INFL	-0.0122**	-0.1993**	0.4384***
	(0.004)	(0.004)	(0.000)
POLT	-0.2391***	-0.0388	-0.1813**
	(0.000)	(0.184)	(0.004)
R^2	**0.820**	**0.818**	**0.920**

5. CONCLUSION & DISCUSSION

This study looked into the growing body of research on the relationship between democratic governance and economic growth. Authors of primary research and existing evaluations have drawn conclusions from a limited data set without reaching a firm conclusion. As a result, we don't find proof that democracy hinders economic development. The currently available evidence suggests that there is no direct effect on the economy's expansion when it is considered as a whole. This result supports Bhagwati (1995)'s claim that democratic government does not limit technical progress. Investigating whether democratic governments promote economic growth is the goal of this study. Using a panel of 10 ASEAN nations as subjects, this article examines the relationship between democratic government and economic growth from 2000–2022. Our key conclusions can be summed up as follows: First, we find that, for four different metrics of democracy, the influence of democracy on economic development is unfavorable and statistically significant. This result holds for all four metrics. Second, the same outcome was found when the GMM system was examined. The governmental structures of all ASEAN nations must be strengthened. Many nations are working to increase democratic accountability, reduce corruption, and end international conflicts because they believe a strong political system can help to accelerate economic development. This is due to the possibility that a functional political system may help to accelerate economic growth. Long-term protection of civil and political rights is necessary if we are to experience sustained economic progress. To deepen academic understanding of this subject, this study could be expanded to incorporate additional democratic determinants and econometric frameworks (Panel Data). After a series of

revolutions, a well-functioning democratic government can positively influence long-term economic growth in some countries. This study could be expanded to incorporate additional democratic factors and econometric models.

6.   IMPLICATIONS

6.1   Theoretical Implications

The theory that explains the connection between democracy and public service has been strengthened by this study. Indeed, the government and other stakeholders are accountable for any nation's economic growth. However, this study adds to the body of knowledge and emphasizes how the function and structure of government directly affect any nation's ability to grow economically. The relationship between economic sustainability and governmental practices was discussed in earlier studies, but the current study emphasizes how much more advanced and pro-growth the democratically elected government is. This study fills a void in the literature by emphasizing how important economic development was during the pandemic to the democratic governments of the ASEAN nations. The findings of this study also contribute to the growing body of literature on the effects of COVID-19 on trade and the economy. Because the earlier literature was silent about the effects of democracy on economic growth in the ASEAN countries, the theoretical implications of this study are significant and would further enrich the literature. Future researchers would benefit greatly from expanding the body of literature to comprehend these important effects and form fresh perspectives for investigations. In this way, the study's important implications make a noteworthy contribution to the literature by outlining the connections between various factors that haven't been covered in earlier research. Therefore, taking into account these implications will help future research be developed.

6.2   Practical Implications

The current study sought to examine how democracy affected the economies of ASEAN nations during the COVID-19 pandemic. This study has added theoretical implications to the body of knowledge and literature. The ASEAN countries' government needs to consider the significant practical implications of this study to improve economic growth. The study's findings show that to promote economic growth, all parties involved in governance in a nation should cooperate. This is because, under democratically elected regimes, the government must strengthen good governance. Therefore, the democratic government should establish the joint working authority with other industry stakeholders to work on economic growth. The democratic government must consider both the general populace's views and the findings of economic experts to perform better in times of crisis. The results of this study also demonstrate the necessity of developing a plan for managing the economy and the need for the government to prioritize exports. The government must implement industrial reforms in this regard, and these regulations must be designed to stabilize the nation's economic growth. Similarly, it is the government's

duty to adhere to the standards and metrics used by advanced and developed nations to improve their economic growth during COVID-19. Economic growth is thus possible through cooperation between pacts and international agreements.

7. FUTURE DIRECTION

Without a doubt, this study aims to investigate how democracy has affected the economic development of ASEAN nations during the COVID-19 epidemic. Even so, this study has offered comprehensive information about these relationships. Future research, however, can expand on this field of study by looking at the connection between sound governance and economic expansion. The focus of this study is only on the contribution of democracy to economic expansion. On the other hand, future research might concentrate on the role that bureaucracy played in managing the economic problems of ASEAN nations during the pandemic, providing extensive information about how to improve bureaucracy training for handling most economic issues. Future research on the effects of democracy on economic growth may concentrate on non-ASEAN nations since the findings of this study are based on ASEAN nations.

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