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Polarisation of Policy Responses to COVID-19 Among ASEAN Countries

Polarização das Respostas Políticas ao COVID-19 entre os Países da ASEAN

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Abstract

COVID-19 pandemic effects are heterogenous in nature due to the differences in policy responses among the nations, with no exception to Association of Southeast Asian Nations (ASEAN). COVID-19 responses undertaken by individual member countries of ASEAN have been tremendously diverse and have ranged from strict lockdown conditions in the highly regulated city-state of Singapore to 'business as usual', especially in rural areas of developing countries with large informal economies such as Laos and Myanmar. Studies on the nexus between concerted regional effort and the consequences of the pandemic appear to be limited; thus, this study aims to investigate the polarisation of the policy responses among the individual ASEAN countries. Examining the polarisation trend offers an insight on the responses of the nation towards handling the COVID-19 pandemic. This study employs Philips and Sul method to test the convergence of the polarisation of ASEAN countries.

Keywords: Convergence club, ASEAN, COVID-19, Government Support

JEL Codes: E6, H5, O5

Resumo

Os efeitos da pandemia do COVID-19 são de natureza heterogênea devido às diferenças nas respostas políticas entre as nações, sem exceção à Associação das Nações do Sudeste Asiático (ASEAN). As respostas à COVID-19 empreendidas por países membros individuais da ASEAN foram tremendamente diversas e variaram de condições estritas de bloqueio na cidade-estado altamente regulamentada de Cingapura a 'negócios como de costume', especialmente em áreas rurais de países em desenvolvimento com grandes economias informais, como como Laos e Myanmar. Os estudos sobre onexo entre o esforço regional concertado e as consequências da pandemia parecem ser limitados; assim, este estudo visa investigar a polarização das respostas políticas entre os países da ASEAN individuais. Examinar a tendência de polarização oferece uma visão sobre as respostas das nações para lidar com a pandemia do COVID-19. Este estudo emprega o método Philips e Sul para testar a convergência da polarização dos países da ASEAN.

Palavras-Chave: convergência, ASEAN, COVID-19, Apoio governamental

Códigos JEL: E6, H5, O5

1. INTRODUCTION

COVID-19 pandemic is declared as the first human tragedy by World Health Organization (WHO, 2020) and the intensity of the pandemic is presence throughout the regions; no exception to Southeast Asian region. This impact is experienced more severely among developing countries (Walker, 2020), largely underpinned by weaker health and economy systems. The pandemic hampers the growth in all sectors of economic activity; supply and trade disruption from China, drop in domestic and international tourism as well as lockdown and social containment measures contribute further to the impacts on economy. The aftereffect of this virus is also having a severe impact on Association of Southeast Asian Countries (ASEAN) economies, caused by decline in demand due to uncertainties and policy interventions such as lockdowns, social distancing and travel restrictions. To name a few, these negative impacts include loss of employment or reduced working hours, loss of business sales and income of households. Vulnerable groups are likely to be susceptible due to a lack of resources they can earn on during periods of reduced income (Morgan & Trinh, 2021). Indeed, COVID-19 is fuelling panic in the developing markets and in the context of ASEAN, the effect is heterogeneous in nature due to the differences in policy responses among member countries.

Across the globe, taskforce teams have been established to specially coordinate and oversee efforts to monitor, prevent, contain, and mitigate the spread of COVID-19. The catastrophic impact of the pandemic calls for high level of government intervention in managing the crisis and containing socio-economic consequences. Before the pandemic, ASEAN governments responded in a somewhat synchronous manner to political and economic challenges (Purnomo et al., 2022). However, in the advent of COVID-19, governance has significantly changed, given the differing views on the appropriateness of policy responses (Pramanik et al., 2020; Saud et al., 2021). Policy collaboration and coordination is integral in maintaining balance between pandemic related containment measures while ensuring the facilitation of essential services. Priority areas include a functioning healthcare system, education availability, continuity of businesses and jobs and maintaining stable financial markets (Organisation for Economic Co-operation and Development OECD, 2020).

ASEAN member countries have been hit hard by COVID-19 ripple effects which has seen the double-edged sword of health and economic crisis unfold since last year. As of April 4, 2022, ASEAN have confirmed 25,913,640 cases, with 274,471 deaths and counting. The pandemic has dampened tourism in the region with many flights suspended; disruptions of supply chain, driven by the negative sentiment on trade, investment and output hampers the growth of the nations. Singapore, Malaysia, and Thailand are engaged in a regional supply chain where COVID-19 pandemic is affecting them the most (Oikawa et al., 2021). Within ASEAN, domestic demand declines and slower economic growth. COVID-19 is fuelling panic amongst consumers, investors as well as governments. The spread of the virus is evolving in an unpredictable way that has disrupted the travel and tourism sectors and first to affect the airlines and hotels (Menon, 2020). COVID-19 hampers the effort to reduce the Gini coefficient gap in the countries as the regional response is the key to recovery from the pandemic (Khanna & Nixon, 2021). As of January 2022, most countries in the region have received two-vaccine supplies, and in many countries, governments are beginning to ease up restrictions, indicating a slow and steady transition to endemicity.

Despite tireless efforts, an inconsistency in confirmed and recovered cases has been observed especially among individual countries. For instance, in terms of severity of the infection, Indonesia has 168 deaths per 1 million of its population while Singapore has 5 deaths over 1 million population. In terms of policy implementation, COVID-19 responses by ASEAN countries have been diverse and varied in terms of intensity (Djalante, et al., 2020a). The effect is heterogeneous in nature due to the differences in policy responses among individual ASEAN countries. For instance, the Singaporean and the Malaysian government imposes strict lockdown and movement control conditions while its rural areas of Lao PDR and Myanmar has relatively subdued restriction mechanisms. The nationwide lockdowns and community quarantine are gradually being relaxed in most of ASEAN countries and economic activities are starting to open; nevertheless, due to the new variant of the virus namely Omicron, travel restrictions for foreign visitors are still enforced.

Based on the abovementioned discussion, it is interesting to investigate the polarization of individual countries responses towards the COVID-19 pandemic. This study aims to answer the question whether a concerted regional effort could mitigate the consequences of the pandemic. The remainder of this study is arranged accordingly: background of the study is offered, and review of past studies

is discussed in the next section, follows by the data and methodology section. The empirical results of this study are presented in results and discussion section, while last section offers the conclusions of the study.

2. BACKGROUND OF THE STUDY

Since March 2020 when the World Health Organisation (WHO) announced the new coronavirus (COVID-19) as a global pandemic; the virus has infected 267 million people and as of December 2021, total deaths due to COVID-19 is 5.28 million people across 210 countries. In the context of ASEAN countries, the virus has killed 274,471 with the total cases of 25,913,640. Djalante et al. (2020b) argued that this figure is underestimated due to the large number of unreported or undiagnosed cases especially in the developing countries.

Table 1 presents the total cases and total deaths in 10 ASEAN countries as of December 2021 and Malaysia has recorded the highest fatality ratio as a percentage of its population (1%) while Singapore has the lowest death rate in the region (0.02%). The ranking in Table 1 refers to the order of total COVID-19 cases recorded in the region.

Table 1: Number of Cases in ASEAN Countries

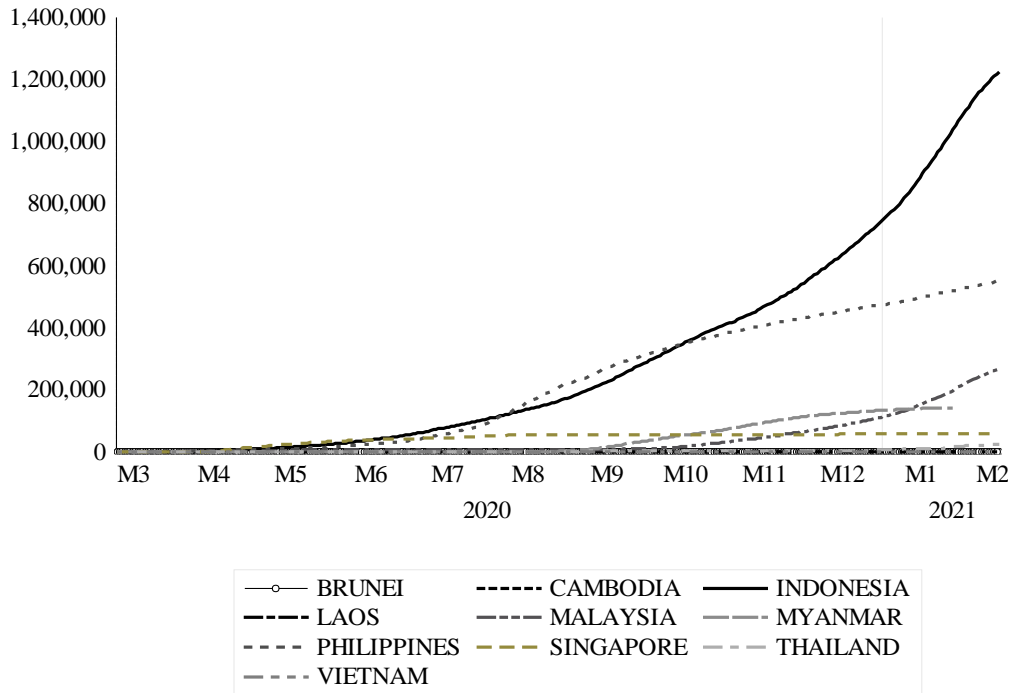
Rank	Country	Total Cases	Total Deaths	Population	Vaccination Rate (%)
10	Brunei	15 202	98	441,850	82.1
8	Cambodia	120 272	2 963	16,960,165	83.8
1	Indonesia	4 257 815	143 876	276,540,989	36.9
9	Laos	80 722	210	7,385,597	42.1
3	Malaysia	2 663 024	30 652	32,798,387	81.5
6	Myanmar	524 638	19 146	54,790,645	21.8
2	Philippines	2 835 154	49 499	111,101,658	36.4
7	Singapore	269 873	763	5,898,371	89.3
4	Thailand	2 148 766	20 995	69,983,006	60.1
5	Vietnam	1 323 683	26 483	98,252,577	56.2
	TOTAL	14 239 149	294 685	674 153 245	Mean = 59.2

Source: Worldometer (2021)

The COVID-19 pandemic has triggered the various responses of the government of ASEAN countries including the declaration of national emergency (Hart et al., 2020). The measures of government responses could be classified into indicators such as containment and closure; economics response; health policies and vaccine policies (Hale et. al, 2021). As far as the media coverage is concerned, the public tends to trust the political elites more than the experts (Druckman et al., 2013) and Hart et al. (2020) suggested network news coverage is found less politicized than the mainstream newspaper. Hence, it is deemed important to provide insights of the government responses towards handling COVID-19 pandemic.

COVID-19 responses by the individual ASEAN members are diverse; different stages of movement restrictions from local lockdowns to the closed borders are imposed by the ASEAN members. On another note, ASEAN countries has also forged a form of region-wide framework involving the health sector under the ASEAN Socio-Cultural Community (ASCC) pillar, stronger cross-sectoral collaboration towards COVID-19 recovery is encouraged, with the implementation of the ASEAN Comprehensive Recovery Framework (ACRF) (ASEAN, 2021).

Figure 1: COVID -19 in Asia
Panel A: Total COVID -19 Cases



Panel B: COVID -19 per million people

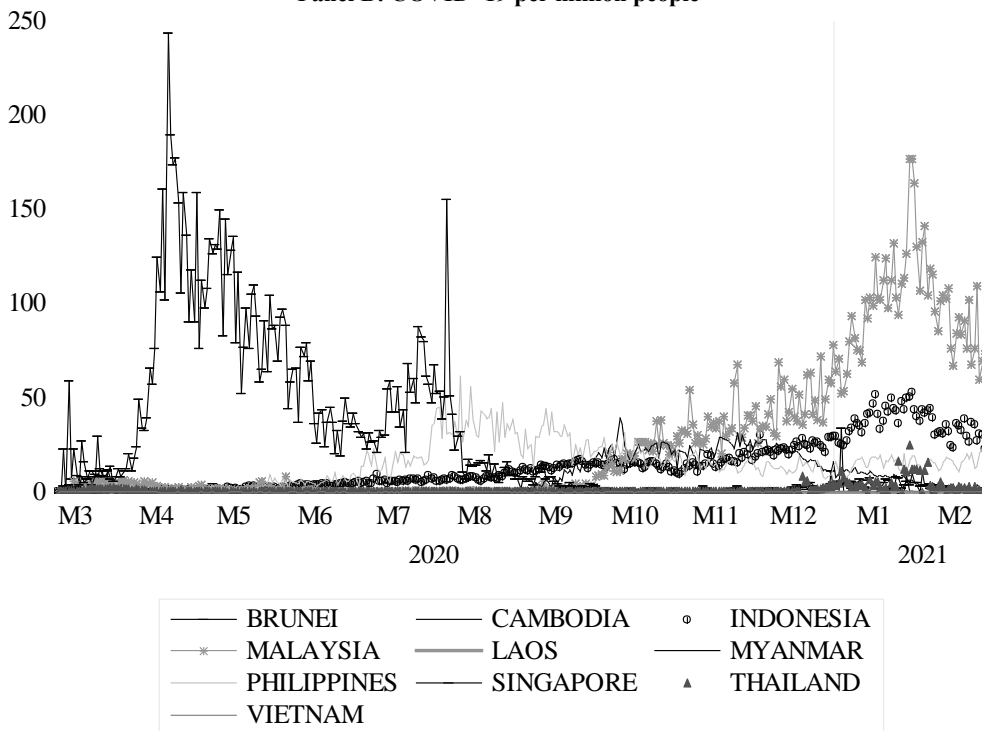


Figure 1, Panel A and B illustrates the total number of COVID -19 cases and new cases per million people, respectively. Panel A shows that over time, Indonesia, Philippines and Malaysia recorded the highest number of cases in the region. Interestingly, a different scenario is observed when controlling for population, as shown in Panel B. Singapore initially recorded the highest number of incidence infection rate from March 2020 for a period of 6 months. However, the circuit breaker policy (implemented from 7 April 2020 to 1 June 2020) proved to be effective, as the curve was flattened by August 2020. On the contrary, Malaysia and Indonesia display an increasing rate of COVID -19 intensity of incidence since September 2020. COVID -19 occurrence in CLMV countries appears to be relatively subdued in both the panels below. Indeed, different countries have different policies and strategies in curbing the effects of the virus.

With the population of 441,850, Brunei has set an exemplary of the COVID-19 policy measures. For instance, financial aid amount to B\$1.7 million to small and medium-sized enterprises (SMEs) in the form of deferment of principal or loan repayment and exemptions from fees and charges including a six-month deferment of principal repayments of financing and loans for tourism, hospitality, food, air transport, and medical supplies industries (Runde et al., 2021). Malaysian government offers US\$36.2 billion aid package for cash aid, loan moratoriums, tax breaks, grants, and wage subsidies while Myanmar provides US\$31 cash handout to households that are facing hardship during COVID-19 time. Besides, US\$1 billion stimulus programs have been released from the IMF and the Japan International Cooperation Agency (JICA) to Myanmar.

In the Philippines, the authorities had disbursed US\$472 million in financial assistance with US\$3.4 billion pandemic relief aimed to expand healthcare and assist small businesses. Other countries such as Cambodia tried to support businesses and low-income households by including the exemptions for the aviation, transport, and logistic sectors and Cambodia spent over \$300 million to support low-income households through a cash assistance program. Cambodia also launched a \$200 million Business Recovery Guarantee Scheme by the Credit Guarantee Corporation of Cambodia to support the economic recovery. Vietnam allocated US\$1.3 million in soft loans to 207 businesses to pay the wages of workers who lost their jobs.

Indonesia spent US\$8.7 billion on social assistance and US\$12.8 billion on healthcare in response to a spike in COVID-19 cases. Government extended the tax deferrals, reduced monthly corporate tax instalments, and accelerated value-added tax refunds too. Under a new temporary grant program, a COVID-19 Resilience Package worth US\$8.3 billion was introduced to support vaccinations, testing, contact tracing, medical care, financial support for businesses, and cash handouts and tax rebates for millions of lower income Singaporeans. In the context of Thailand, the nation issued government savings bonds worth over \$1 billion to finance state projects. In a bid to boost domestic tourism, the extension and expansion of the “We Travel Together” scheme has been implemented. Despite the various government responses in respond, ASEAN member countries have a long history of cooperation through trade regionalisation and economic integration.

In 2021 and 2022, vaccination against COVID-19 is an integral part of national policies and as a mean to respond to the disease. A successful vaccination policy helps resolve several COVID-19 related problems; provided prevention from the disease, reduce risk of transmission and prevents majority of the population from experiencing severe symptoms, which indirectly help the national healthcare system from being overwhelmed. As such, there was an immediate demand from governments to secure vaccine doses, in order to expedite the process of restoring the health and economy of nations to pre-pandemic levels. The approach adopted by majority of the ASEAN countries are that the vaccination programmes follow a phased approach by age, after prioritising frontliners. By early 2022, many member states started to transition towards endemic new normal, following the region’s rapid progress in vaccinations. Indeed, the adverse impact of the pandemic has been mitigated by several policy responses and actions. However, as the region transitions to endemic new normal, policy responses will also need to be as flexible and swift to change as the constant mutation of the virus. Any premature withdrawal of the government support measures could potentially trigger another crisis.

3. METHODOLOGY

3.1 Description of Data

The dataset of ASEAN over the period of 1/3/2020 until 31/1/2021 is used to estimate the impact of COVID-19 and its link to government responses. The dataset is daily in nature and involves the 10 member countries of ASEAN, namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, Malaysia, Philippines, Singapore, Thailand and Vietnam.

To capture the effects of government responses and intervention in tackling and mitigating the negative consequence of COVID-19, this study employs three versions of the index, namely government response index, stringency index and economic support index. These policy responses datasets are adopted from Oxford COVID-19 (Hale et al., 2021). These indexes calculate the weighted averages of individual constituents to construct an index. Specifically, a total of 15 indicators makes

up the government response index and this covers an array of indices such as containment and closure, economic and health system policies. Subsequently, stringency and economic support index is a disintegrated version of the government response index. Stringency index focuses on containment and health system policies, covering a total of 9 indicators, while the economic support index comprises of income support and moratorium relief. Further information regarding the description of each index is highlighted in Table 2 below. Number of new active cases is used to indicate COVID-19 infectivity levels of the countries. Data for new cases is obtained from Hasell et al. (2020).

Table 2: Indices for Government Response, Stringency, and Economic Support Index

Dimensions	Indicators	Government response index	Stringency index	Economic support index
Containment and Closure	School closures	√	√	
	Workplace closures	√	√	
	Public event cancellations	√	√	
	Restrictions on gatherings	√	√	
	Public transport	√	√	
	Stay at home	√	√	
	Restricted movements	√	√	
	International travel controls	√	√	
Economic Support	Income support	√		√
	Debt/contract relief	√		√
Health System Policies	Public information campaigns	√	√	
	Testing policy	√		
	Contact tracing	√		
	Facial Coverings	√		
	Vaccination Policy	√		

Source: Ritchie et al. (2020)

3.2 Economic Specification

To distinguish the COVID-19 transition paths, this study executes a novel approach postulated by Phillips and Sul (2007; 2009). This method is based on the clustering algorithm that is used to test for conditional sigma convergence of a panel. In other words, club clustering of countries is based on transition paths. Unlike the Solow-Swan growth model (1956), this method considers a nonlinear and time-varying factor model that is able to capture the possibility of transitory heterogeneity and transitory divergence. This convergence club testing does not rely on unit root properties and instead uses transitional dynamics in addition to long-run behaviour of the variable (Phillips and Sul, 2009). Therefore, it is able to account for stationary and non-stationary biasness in the panel. Unlike the conventional beta and sigma convergence (Barro & Sala-i-Martin, 1992), Phillips and Sul incorporate common and cross-sectional behaviours to find several steady-state club convergences.

In a panel data for X_{it} , where X_{it} indicates the COVID-19 government responses and new reported cases, N and T are number of countries and sample size, respectively. The systematic q_{it} and transitory s_{it} components of X_{it} is written as:

$$X_{it} = q_{it} + s_{it} \tag{1}$$

Phillips and Sul transform equation (2), separating time-varying idiosyncratic δ_{it} distance between common factor μ_t .

$$X_{it} = \left(\frac{q_{it} + s_{it}}{\mu_t} \right) \mu_t = \delta_{it} \mu_t \tag{2}$$

Within this framework, both δ_{it} and μ_t are time-varying. Eventually, all N economies will convergence at some point in the future, irrespective whether the countries are near the steady state. The transition parameter δ_{it} , relative measure of the transition coefficient is constructed and shown below (Phillips and Sul, 2007):

$$h_{it} = \frac{X_{it}}{\frac{1}{N} \sum_{i=1}^N X_{it}} = \frac{\delta_{it}}{\frac{1}{N} \sum_{i=1}^N \delta_{it}} \quad (3)$$

Variable h_{it} is the relative transition path, measure the loading coefficient δ_{it} and traces out the individual trajectory for each i relative to the panel average. h_{it} measures region i 's relative departure from the common steady growth μ_t . In order to define the test of convergence and algorithm for club convergence, the following assumption of semi-parametric form for time-varying coefficients δ_{it} is required.

$$\delta_{it} = \delta_i + \sigma_i \xi_{it} L(t)^{-1} t^{-\alpha} \quad (4)$$

where δ_i is fixed $\sigma_i > 0$, ξ_{it} is i.i.d (0,1) across i , but weakly dependent on t , and $L(t)$ is a slow varying function for $\log t$, which $L(t)$ tends move towards infinity as t moves to infinity. ξ_{it} denotes the time-varying and region-specific components to the model. The size of α predicts convergence or divergence of δ_{it} .

Next, Phillips and Sul construct the cross-sectional variation ratio, H_1 over the variation for every point in time, t . Ratio of $\frac{H_1}{H_t}$ estimates the panel distance from common limit. The hypothesis can be tested by following the 'log t' regression model:

$$\log\left(\frac{H_1}{H_t}\right) - 2 \log(\log(t)) = a + b \log t + u_t \quad (5)$$

where $t = [rT], [rT]+1, \dots, T$ with $r > 0$. Based on simulation experiments, Phillips and Sul (2007) suggest $r = 0.3$ as Monte Carlo simulations show that r satisfies both properties of size and power of the test. Some of the first observations are discarded and in order to test for convergence, focus will be on the latter part of the sample.

The coefficient b is related with α , whereby the fitted value of $\log t$ is $\hat{b} = 2\hat{\alpha}$, where $\hat{\alpha}$ is the estimated value of α under the null hypothesis. Equation (5) has three stages. Firstly, H_1/H_t cross-sectional variance ratio is constructed. Then, the conventional robust t statistic $t_{\hat{b}}$ is constructed for the coefficient \hat{b} . In the third step, the autocorrelation and heteroscedasticity robust one side t test of the inequality null hypothesis $\alpha \geq 0$ is applied with the estimated coefficient \hat{b} . By employing the t -statistics, null hypothesis is rejected if the statistic has a value below -1.65. Convergence patterns can be examined using the log t regressions, whereby that there is an existence of club convergence. Unlike other conventional convergence testing, the rejection of the null of convergence does not necessarily suggest divergence, since different scenarios can be met, as convergence clusters and divergent regions may exist in the full panel. This indicates that when the t -stat value is above -1.65, convergence club exists between two countries or more.

4. RESULTS AND DISCUSSION

The existence of heterogeneity in COVID-19 cases across ASEAN states provides impetus to employ the Phillips and Sul test, and the results of government intervention in member countries are reported in Table 3. The results indicate that member states in the aggregate panel are diverging in terms of government support index as the $\log(t)$ value (-220.38) is less than the critical value of -1.65. This indicates that countries are not following similar transition paths and therefore warrants convergence club testing. Outliers are detected when a country fails to converge into any of the groups, i.e., the convergence testing results is less than the t -stat of -1.65.

Table 3: Results of Convergence for Government Support Index

Clubs	Countries	t-stat
Full Sample	ALL ASEAN Countries (diverge) Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam	-220.845
Outlier	Myanmar	-5.115
1 st club	Malaysia, Singapore	-1.498
2 nd club	Vietnam, Philippines, Indonesia, Thailand	0.789
Outlier	Brunei Darussalam	-4.518
3 rd Club	Lao PDR, Cambodia	16.448

Note: The critical value is -1.65 at 5% level of significance level.

Table 3 shows that though full convergence is not observed in ASEAN, there is convergence present at the club level. Club 1 comprises of Malaysia and Singapore and this finding correlates with the relatively high initial recorded COVID -19 cases. Club 2 includes Vietnam, Philippines, Indonesia and Thailand. Club 3 encompasses of countries with relatively low confirmed COVID-19 cases, namely Lao PDR and Cambodia. Among the sample countries, Myanmar and Brunei Darussalam are outliers, i.e., not converging with any of the groups, indicating that both countries fail to converge into any of the groups.

Furthermore, this study also examines convergence for government intervention in terms of stringency and economy support. The results are reported in Panels A and B in Table 4. In terms of economic support, results of Panel A shows that member states in the aggregate panel are converging, as the $\log(t)$ value (1.796) is more than the critical value of -1.65 . This shows that countries are on the same transition path in providing aids during the pandemic. Convergence testing for stringency levels paint a slightly different picture. Full sample for stringency index demonstrates divergence among countries. However, the analysis shows two club convergences are formed. The first club shows evidence of polarization between Malaysia and Myanmar, while the second club comprises of Indonesia, Philippines, Thailand, Singapore, Cambodia, Brunei Darussalam and Lao PDR. Vietnam is an outlier and does not converge into either group.

Table 4: Results of Convergence for Stringency and Economic Support Index

Clubs	Countries	t-stat
Panel A: Economic Support Index		
Full Sample	Full Sample (converge) Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam	1.796
Panel B: Stringency Index		
Full Sample	Full Sample (diverge) Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam	-2.016
1 st club	Malaysia, Myanmar	4.861
Outlier	Vietnam	-5.455
2 nd club	Indonesia, Philippines, Thailand, Singapore, Cambodia, Brunei Darussalam, Lao PDR	-1.521

Note: The critical value is -1.65 at 5% level of significance level

Based on the results highlighted in Table 3 and 4, club polarizations of stringency index broadly correlate with government response. Since the government response index encompasses of both stringency and economic support, it is unsurprising that government containment lockdown related policies take precedence amidst the pandemic. The results above confirms that Covid-19 responses undertaken by individual countries are diverse and ranges between level of strictness. In the context of stay home policies, border closures and travel restrictions, states are compelled to take proactive stance, in response to lowering the

number of infected cases (Djalante et al., 2020b). This, combined with stimulus packages, rapid testing and vaccination rollouts shaped the health outcomes between and within countries.

Based on the convergence club analysis, a few findings can be drawn. Firstly, policy responses among members are diverging and different in nature. Next, economic response does not necessarily correlate with the flattening of COVID -19 curve in some of the countries. On the one hand, in small populous countries such as Brunei Darussalam and Singapore, stringent steps were taken to contain the virus, including the implementation of a combination of measures such as massive testing, movement restrictions and stimulus packages. For instance, in Brunei, there was a spike in cases in March 2020, but the country has been free from COVID -19 transmission since May 2020 (Purnomo et al., 2022). Brunei's focus is on the welfare of its citizen, with directives such as ensuring that all employees receive salaries and wages during quarantine, as well as an allocation of BND250 million for small to medium enterprises (SMEs) (Djalante et al., 2020a). The Bruneian government imposed strict mass gathering ban, in conjunction to carrying out technology-based contact tracing and rigorous quarantine measures to keep virus transmission under control. In Singapore, circuit breaker policies were introduced to tackle the spike in cases (due to migrant workers cluster) (ASEAN Biodiaspora Virtual Center (ABVC), 2020). These policies were proven successful, as it resulted in the nation having the lowest death toll in the region (29 fatalities as of 15 February 2021). Indeed, ASEAN member countries were hit by the Omicron wave; Singapore for instance recorded its first case in early December 2021, while Brunei Darussalam's first case was recorded in end-December 2021. However, most countries have begun taking decisive steps toward easing restrictions after Omicron peaks.

On the other hand, for Indonesia, Philippines and Malaysia, the battle against COVID -19 is far from over. In Indonesia, high number of populations with disproportionately inadequate medical infrastructure resources attributed to the rising number of COVID -19 positive cases. Similarly in Philippines, due to shortages of medical personnel and underfinanced health infrastructure, the national public health system is struggling to cope with the continuous increase in cases. Malaysia was once hailed as one of the most successful countries in dealing with COVID -19. However, cases started to surge in early September 2020 and start rising to quadruple digits in October 2020. Premature relaxation of COVID -19 restrictions and poor standard operating procedures (SOP) compliance seems to be a key issue (Oikawa et al., 2021). Malaysian government has announced a series of economic stimulus packages to reduce impacts to industries and communities. The first stimulus package (worth RM20 billion) is aimed at helping the business section deal with the pandemic impact, and the second stimulus package allocated RM25 billion to help families and SMEs affected by the outbreak. Malaysia has imposed several versions of movement control orders (MCO) and the country has been on a prolonged lockdown state, which is reflected in the club of high stringency index levels.

The relatively low number of COVID -19 cases observed among CLMV cases are often linked to low testing rates (Djalante et al., 2020a; Lee et al., 2020). According to Lee et al. (2020), CLMV countries have relatively lower testing rates compared to other countries in ASEAN, averaging between 2.6 (Myanmar) to 6.4 (Cambodia) test per a thousand population as of September 2020. Nevertheless, containment and closure policies were applied intensively in some of these countries. As seen in convergence club of stringency index in Table 4 Panel B, Myanmar imposed relatively high intensity in terms of mobility restrictions. The containment and control measures were also implemented for relatively longer period. Similarly, the Vietnamese government demonstrated quick response to combat the pandemic, by being the first nation after China to isolate a residential area, to suspend further transmission (Djalante et al., 2020b). Lockdowns and containment measures were also

imposed during the second wave. Efficient pandemic management has resulted in Vietnam making a leading economic comeback among the four emerging economies of ASEAN.

Despite diverging policy decisions observed in response to the pandemic, ASEAN member countries have a long history of cross-border cooperation, established through economic integration. Throughout the pandemic, discussions related to mitigating the effects of COVID -19 have been ongoing. Member countries pledge to honour their solidarity by ensuring usual trade flows and supply chain connectivity, particularly for essential products. Through the Special ASEAN Summit on COVID -19 in April 2020, members stress the need to collaborate to mitigate the socioeconomic aftereffects of COVID -19. The COVID -19 ASEAN Response Fund was established as the outcome of the summit. To flatten the curve in the region, there is an urgent need to intensify health and economic related cooperation on pandemic response. For countries with limited fiscal space but require further stimulus measures, support should be given by regional banks.

5. CONCLUSION

This study investigates the polarisation of the policy responses among the individual ASEAN countries. Based on the convergence club analysis and the figures above, a few findings can be drawn. Firstly, government intervention in member countries is diverging and different in nature. Although, convergence is not observed in ASEAN, there appears to be clusters among member states. When dissecting into types of intervention, economic support shows that member states in the aggregate panel are converging, while convergence testing for stringency levels demonstrates divergence among countries. Indeed, this research concludes that policy responded to COVID-19 in ASEAN countries is disproportionate.

Developing economies including ASEAN have distinct characteristics that entail different government support policies from developed countries, with an array of issues to address such as larger informal sectors, weaker healthcare systems, lower fiscal capacity, higher levels of physical contacts between individuals, and a greater prevalence of intergenerational households. While some ASEAN countries responded quickly and strongly in the right direction to mitigate the impact of the COVID-19 pandemic, others may have been slow to react. Although governance perspective provides many and dissimilar insights into the policy-making environments among member states, ASEAN member countries have a long history of cross-border cooperation, established through economic integration. Throughout the pandemic, discussions related to mitigating the effects of COVID -19 have been ongoing. The importance of a coordinated national and regional response plays a role in the way COVID-19 policies are implemented and their eventual effectiveness. Further research is required to further understand the various impacts and responses to COVID in countries with varying degrees of governance and centralization. It will also be interesting to include research analysing different industries in countries, to uncover the impact of governance systems within the wider context of a pandemic.

REFERENCES

- ASEAN Biodiaspora Virtual Center. (2020). *Risk assessment for international dissemination of COVID-19 to the ASEAN Region*. Retrieved from https://asean.org/wp-content/uploads/2020/02/COVID-19_Report-of-ASEAN-BioDiaspora-Regional-Virtual-Center_20Apr2020.pdf
- Organisation for Economic Co-operation and Development (OECD). (2020). *Building resilience to the Covid-19 pandemic: The role of centres of government*. Retrieved from https://read.oecd-ilibrary.org/view/?ref=135_135808-q2mj1rudey&title=Building-resilience-to-the-Covid-19-pandemic-the-role-of-centres-of-government
- Association of Southeast Asian Nations (ASEAN). (2020). *ASEAN comprehensive recovery framework: Implementation plan*. Retrieved from https://asean.org/wp-content/uploads/2021/08/ACRF-Implementation-Plan_Pub-2020.pdf
- Association of Southeast Asian Nations (ASEAN). (2021). *ASEAN socio-cultural community encourages stronger cross-sectoral collaboration towards COVID-19 recovery*. Retrieved from

<https://asean.org/asean-socio-cultural-community-encourages-stronger-cross-sectoral-collaboration-towards-covid-19-recovery/>.

Barro, R. J., & Sala-i-Martin, X. (1992). Convergence. *Journal of Political Economy*, 100(2), 223-251.

Djalante, R., Nurhidayah, L., Van Minh, H., Phuong, N. T. N., Mahendradhata, Y., Trias, A., & Miller, M. A. (2020a). COVID-19 and ASEAN responses: Comparative policy analysis. *Progress in Disaster Science*, 8, 100-129.

Djalante, R., Shaw, R., & DeWit, A. (2020b). Building resilience against biological hazards and pandemics: COVID-19 and its implications for the Sendai Framework. *Progress in Disaster Science*, 6, 100080.

Druckman J. N., Peterson, E., & Slothuus, R. (2013). How elite partisan polarization affects public opinion formation. *American Political Science Review*, 107(1), 57-79.

Hale, T., Angrist, N., Goldszmidt, R., Kira, B., Petherick, A., Phillips, T., Webster, S., Cameron-Blake, E., Hallas, L., Majumdar, S., and Tatlow, H. (2021). *A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)*. Nature Human Behaviour. Retrieved from <https://doi.org/10.1038/s41562-021-01079-8>

Hart, P. S., Chinn, S., & Soroka, S. (2020). Politicization and polarization in COVID-19 news coverage. *Science Communication*, 42(5), 679-697.

Hasell, J., Mathieu, E., Beltekian, D., Macdonald, B., Giattino, C., Ortiz-Ospina, E., ... & Ritchie, H. (2020). A cross-country database of COVID-19 testing. *Scientific data*, 7(1), 1-7.

Khanna, D. & Nixon, N. (2020). COVID-19: *A regional response is key for ASEAN Recovering from the coronavirus pandemic necessitates a robust regional response*. Retrieved from <https://the-diplomat.com/2020/12/covid-19-a-regional-response-is-key-for-asean/>

Lee, C. Negara, S.D. & Sambodo, M. T. (2020). COVID-19's economic reckoning in Southeast Asia. *ISEAS Perspective*, 107, 1-20.

Oikawa, K., Todo, Y., Ambashi, M., Kimura, F., & Urata, S. (2021). The Impact of COVID-19 on Business Activities and Supply Chains in the ASEAN Member States and India. *ERIA Discussion Paper Series*, (384). ERIA.

Menon, J. (2020). *Assessing the Economic Impacts of COVID-19 on ASEAN*. Retrieved from <https://www.iseas.edu.sg/media/commentaries/assessing-the-economic-impacts-of-covid-19-on-asean/>.

Morgan, P. J. and L. Q. Trinh. 2021. Impacts of COVID-19 on Households in ASEAN Countries and Their Implications for Human Capital Development. ADBI Working Paper 1226. Tokyo: Asian Development Bank Institute. Available at <https://www.adb.org/publications/impacts-covid-19-households-asean-countries>

Phillips, P. C. B., & D. Sul. (2007). Transition modeling and econometric convergence tests. *Econometrica*, 75, 1771–1855.

Phillips, P. C. B., & D. Sul. 2009. Economic transition and growth. *Journal of Applied Econometrics*, 24, 1153–1185.

Pramanik, M., Udmale, P., Bisht, P., Chowdhury, K., Szabo, S., & Pal, I. (2022). Climatic factors influence the spread of COVID-19 in Russia. *International Journal of Environmental Health Research*, 32(4), 723-737.

Purnomo, E. P., Agustiyara, Nurmandi, A., Dewi, A., Rosa, E. M., Bayu, A. H., & Erviana, R. (2022). ASEAN Policy Responses to COVID-19 Pandemic: Adaptation and Experimentation Policy: A Study of ASEAN Countries Policy Volatility for COVID-19 Pandemic. *SAGE Open*, 12(1), 21582440221082145.

Ritchie, H., Mathieu, E., Rodés-Guirao, L., Appel, C., Giattino, C., Ortiz-Ospina, E., Hasell, J., Macdonald, B., Beltekian, D., & Roser, M. (2020). *Coronavirus Pandemic (COVID-19)*. Retrieved from <https://ourworldindata.org/coronavirus>

Runde, D. F., Savoy, C. M., & Staguhn, J. (2021). *Global Covid-19 Vaccine Distribution Handbook*. Center for Strategic and International Studies (CSIS). <http://www.jstor.org/stable/resrep33118>

Saud, M., Mashud, M. I., & Ida, R. (2020). Usage of social media during the pandemic: Seeking support and awareness about COVID-19 through social media platforms. *Journal of Public Affairs*, 20(4), e2417.

Solow, R.M. (1956). A contribution to theory of economic growth, *The Quarterly Journal of Economics*, 70, 65-64.

Swan, T.M. (1956). Economic growth and capital accumulation, *The Economic Record*, 32, 334–361.

Walker, A. (2020). *Developing world economies hit hard by coronavirus*. Retrieved from <https://www.bbc.com/news/business-52352395>

World Health Organization. (2020). *WHO Timeline—COVID-19*. Retrieved from <https://www.who.int/news/item/27-04-2020-who-timeline---covid-19>

Worldometers. (2021). *Coronavirus Data*. Retrieved from <https://www.worldometers.info/>