

# The Government's Policy Response to The Covid-19 Pandemic: its Implication on Employment Rates of Asean Countries

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*Abstract* — The study presented a comprehensive analysis concerning the impact of government policy responses to COVID-19 on employment rates within ASEAN countries. It examined the policy responses to the COVID-19 pandemic, including containment and closure policies, economic policies, health system policies, and employment rates in different economic sectors, such as agriculture, industry, and services, using descriptive statistics. Also, this study used panel regression analysis to test the policy's responses and their influence on employment rates across different sectors for quarterly data from 2020 to 2022. The results revealed that containment and closure measures shifted from less stringent to stricter controls in early 2020, followed by a gradual easing of restrictions throughout 2021 and 2022. Economic policies also evolved, with initial limitations giving way to diversified strategies and a decrease in 2022, suggesting a focus on long-term economic recovery. Health system policies showed significant variations but improvements across ASEAN countries, emphasizing the need for sustained efforts. The agriculture sector faced challenges due to movement restrictions and border closures, while government responses had varying degrees of success in mitigating job losses. The industry sector experienced an overall increase, suggesting potentially positive policy impacts. The services sector presented a more complex picture, with some countries showing strong growth and others facing declines. On the other hand, stricter containment and closure policies affected industrial and service employment rates with a slight decrease. In contrast, economic and health system policies did not affect employment rates statistically significantly. While government policies had limited impacts on agriculture, industry, and service employment rates, significant cross-country variations suggest that unobserved country-specific factors may play an important role. This analysis illustrates the complexity of the pandemic's impacts and the need for tailored policy approaches to address different economic and social challenges effectively.

*Keywords* — ASEAN, containment and closure policies, COVID-19 pandemic, economic policies, employment rates, government policy response, health system policies.

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## I. Introduction

The COVID-19 pandemic began in China in December 2020 and has since spread to over 231 countries, resulting in over 700 million confirmed cases and seven million deaths (Worldometer, 2024). The government's response to the virus has affected not only the economy and healthcare but also employment conditions, particularly in ASEAN countries. The International Labor Organization (ILO, 2021) estimates that the ASEAN unemployment rate increased from 2.5% in 2019 to 3.1% in 2020, causing significant employment losses. Employment in the services sector decreased by 3.1% between 2019 and 2020, while employment in the agriculture and industry sectors decreased by 2.5% and 1.8%, respectively. This study can translate this finding into policy recommendations for the government, such as providing reskilling and upskilling programs to bridge the skills gap, enhance employability, and promote inclusivity for workers needing to catch up with those with higher education levels. The agriculture industry is still an essential sector to include in this study, as it has been harmed by supply chain disruptions, a lack of workers, and a decline in the market for agricultural products. The government's policy response to the pandemic in the agricultural sector is crucial because it may aid in safeguarding the livelihoods of farmers and agricultural workers, ensuring food security, and promoting economic recovery (Food and Agriculture Organization of the United Nations, 2022).

The effectiveness of government policies in mitigating the impact of COVID-19 on the labor market caused a heated debate. However, there is still a need for comprehensive empirical research that scientifically analyzes the efficiency of these essential government policy responses. The ASEAN Comprehensive Recovery Framework (ACRF) is a critical solution to this current problem, providing workers' financial support, skills development, and protection against job losses. Understanding the continual effect of COVID-19 on employment, such as the formation of new variants and the ambiguity surrounding the "new normal," is critical for developing effective policy solutions to the pandemic. Analyzing the government's policy responses to COVID-19 and its consequences for the labor market gave valuable insights into areas that require improvement.

By evaluating the impact of government policies on employment, this study examined the implications of the government's policy responses to COVID-19 on the employment rates in the ASEAN countries. Specifically, it answered the following research questions:

1. What are the differences in implementing the ASEAN government's policy measures in response to the COVID-19 pandemic in terms of containment and closure policies, economic policies, and health system policies?
2. What are the differences in employment rates by economic sector among the ASEAN countries from 2019 to 2022?
3. Does the government's policy response to COVID-19 affect the employment rates in the economic sector among the ASEAN countries?

## II. Methodology

**Research Design.** The study utilized both descriptive and causal research designs to evaluate the government's policy responses and employment rates during the COVID-19 pandemic. The descriptive research design focused on the variables under evaluation, while the causal research design examined the causal relationships between the government's policy responses to COVID-19 and employment rates.

**Data Sources and Collection.** Secondary data was obtained from the Oxford's COVID-19 Government Response Tracker (OxCGRT), a comprehensive database tracking policy initiatives implemented by countries to address the pandemic (Hale et al., 2020). An ordinal scale data were collected for government's responses to COVID-19, and these were categorized into different government policy categories, including containment and closure policies, economic policies, and health system policies from January 2020 to December 2022. On the other hand, the Labor Force Survey of various ASEAN countries, integrated by the International Labour Organization's Department of Statistics (ILOSTAT) were provided to collect the employment data of different economic sectors from 2019 to 2022. For this study, a quarterly employment rate data for economic sectors (agriculture, industry, and service sectors) are obtained from the ILOSTAT.

**Data Analysis.** This study utilized descriptive statistics and data visualization techniques to summarize and present the key features of the policy measures. The researcher employed Microsoft Excel 365 and GeoDa (a software package for spatial data analysis and geo-visualization) to examine the implementation of policy by the government in response to the COVID-19 pandemic. Descriptive statistics and data visualization techniques are employed to examine the employment rates per economic sector among the ASEAN countries. This study visually presented employment trends or patterns over time in different sectors through bar graphs using Microsoft Excel 365.

In addition, this study employed the index developed by the Blavatnik School of Government's Oxford COVID-19 Government Response Tracker (OxCGRT) to create a policy sub-index as follows (Hale et al., 2020):

$$I_{jt} = 100 \frac{v_{jt} - 0.5(F_j - f_{jt})}{N_j}$$

where:

$I_{jt}$  = index score of policy sub-indicator ( $j$ ) on any given day ( $t$ )

$v_{jt}$  = recorded policy value on the ordinal scale of policy sub-indicator ( $j$ ) on any given day ( $t$ ). If  $v_{jt}=0$ ,  $I_{jt} = 0$ .

$F_j$  = the policy sub-indicator has a flag variable ( $F_j = 1$  if yes; or 0 if otherwise). If  $F_j = 0$ , then  $f_{jt} = N/A$  or 0

$f_{jt}$  = recorded binary flag value for policy sub-indicator ( $j$ ) on any given day ( $t$ ). An  $f_{jt} = 1$  means that there is a presence of policy measures ( $j$ ) implemented by the government on that day ( $t$ ); or 0 if otherwise.

$N_j$  = maximum value of the policy sub-indicator

This study categorized the policy sub-indicators into three general policy indices: containment and closure policy index, economic policy index, and health system policy index. The containment and closure policy index assessed the degree of urgency of government measures for COVID-19. This measure includes mandatory stay-at-home orders, restrictions on gatherings and internal travel, cancellations of public events, closures of workplaces, public transportation, and schools, and controls on international travel. On the other hand, government efforts to lessen the economic effects of COVID-19, such as income support and debt/contract relief, are measured by the economic policy index. The health system policy index evaluates a nation's competence and readiness to deal with a pandemic, considering public awareness campaigns, testing and vaccination policies, contact tracing, and facial coverings.

Higher values on the index, which ranges from 0 to 100, indicate more stringent government policies to prevent the spread of COVID-19. Using GeoDa, these indices will be converted into colored maps (light to dark color) to visually noticed the degree of stringency by the ASEAN government. The darker, the more responsive or strict is the government to impose policies. To get the general policy index, the researcher used the simple average of all individual index scores of policy sub-indicators formulated by the OxCGRT as follows (Hale et al., 2020):

$$Index = \frac{1}{k} \sum_{j=1}^k I_{jt}$$

where:  $k$  = number of policy sub-indicators

$I_{jt}$  = index scores of policy sub-indicators ( $j$ ) on a given day ( $t$ )

Since the OxCGRT had daily records for the policy sub-indicators, the researcher utilized the mean to obtain the average index by quarter, matching the employment data, using Microsoft Excel 365. Once the computed values for variables under investigation are obtained, the next step employed by the researcher is the panel regression analysis (Baltagi, 2021). Panel regression analysis was used to investigate the impact of COVID-19 policies on employment rates across ASEAN nations per economic sector. This technique effectively handles cross-sectional and time-

series data for 2020-2022. However, panel regression relies on specific assumptions, such as no autocorrelation or error independence, homoscedasticity, no or little multicollinearity, and no endogeneity. The researcher chose a fixed-effects model to account for unobserved country-specific effects, while a random effects model assumed these effects were random and uncorrelated with independent variables. The Hausman test helped decide between FE and RE models, with a p-value less than 1% or 5% rejecting the null hypothesis that the coefficient difference is not systematic. Other potential issues like autocorrelation and heteroscedasticity could be addressed using Newey-West robust standard errors (Arellano, 1987, as cited in Baltagi, 2021).

This study requires three-panel regression models since both cases use three dependent variables and similar policy indices as predictors. The general model used in this study is (Baltagi, 2021):

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \alpha_i + \gamma_t + \varepsilon_{it}$$

where:  $Y_{it}$  is the employment rate in a specific economic sector for an ASEAN country ( $i$ ) at quarter ( $t$ );  $X_{1it}$ ,  $X_{2it}$ , and  $X_{3it}$  are policy indices for containment and closure, economic, and health system policies for an ASEAN country ( $i$ ) at quarter ( $t$ );  $\beta_0$  is the constant term;  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are coefficients represent the estimated effects of the policy indices;  $\alpha_i$  and  $\gamma_t$  the the unobserved country and time effects, respectively; and  $\varepsilon_{it}$  = error term

This study estimated the coefficients for the equation models using the panel data. Assessing the strength and importance of the links between policy indices and employment rate by economic sector is more accessible by looking at the significance of the coefficients and goodness-of-fit measurements (such as the R-squared). Moreover, this study evaluated the variability in employment rates between and within countries after accounting for the effects of policy variables ( $\sigma_u$  and  $\sigma_e$ ). It assessed the proportion of the variation in employment rates due to between-country differences ( $\rho$ ). This study thoroughly evaluates how government policy changes impact employment rates in agriculture, industry, and service sectors for selected ASEAN countries using panel regression analysis with the aid of STATA version 14.

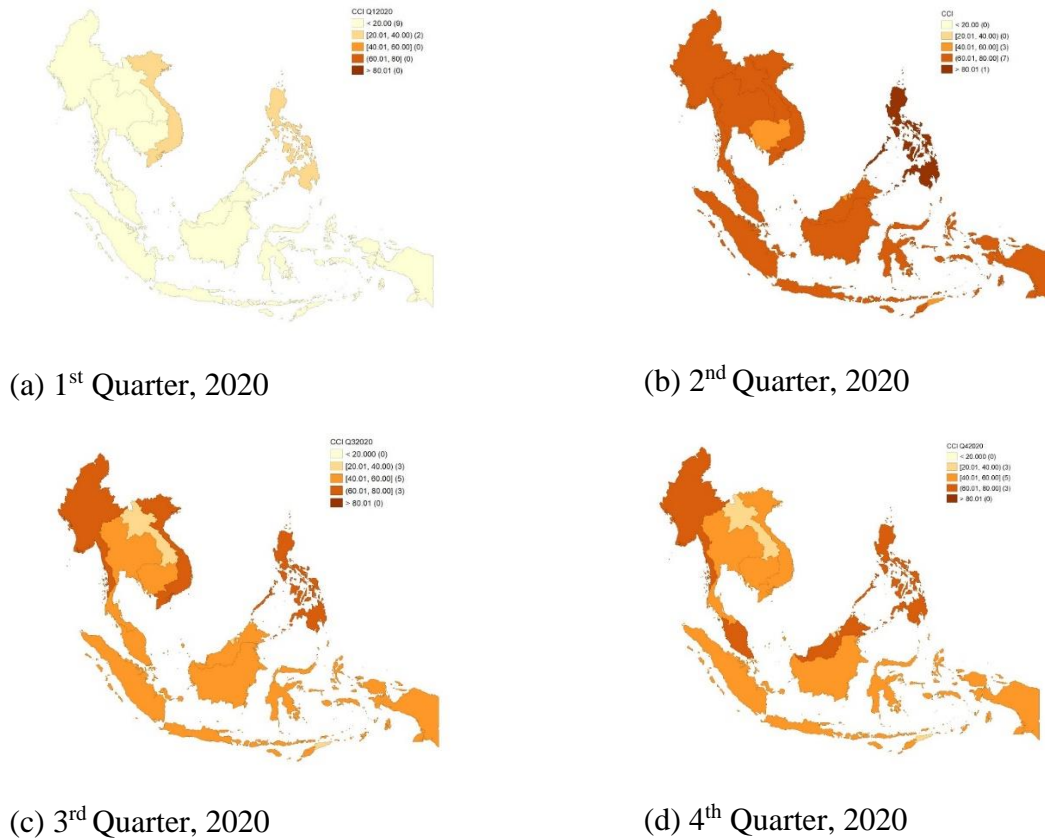
### III. Results and Discussion

#### Containment and Closure Policy Measures to COVID-19 by ASEAN Countries

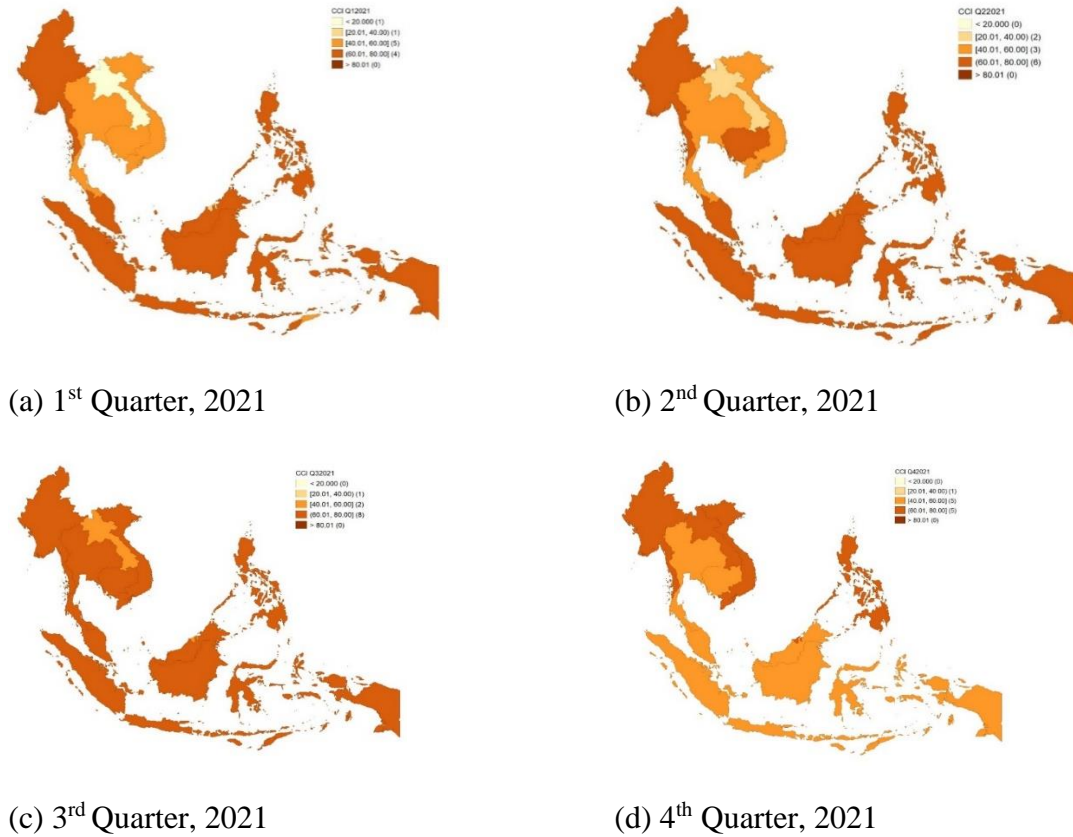
The Containment and Closure Policy Index (CCI) map of ASEAN countries in 2020 reveals the variation in the strictness of government policies implemented to contain the spread of COVID-19 (Figure 1). All ASEAN countries had a CCI lower than 20 in the first quarter of 2020, indicating few or no safeguards to a few confinement and closure measures in place. However, the CCI increased significantly in the second quarter of 2020, with three countries imposing moderate measures with considerable gathering and movement limitations. The Philippines imposed an

Enhanced Community Quarantine throughout the island of Luzon, declaring the entire country under the State of Calamity for six months from March 16, 2020 (Calimon & Masangkay, 2020). A reduction in CCI was observed in the third and fourth quarters of 2020, with Brunei, Laos, and Timor Leste implementing moderate to slight measures due to lower COVID-19 caseloads. The rest imposed strict to moderate measures, suggesting a cautious approach to easing restrictions due to continued concerns about COVID-19.

In the first quarter of 2021 (in Figure 2), ASEAN countries adopted a cautious approach by easing from strict to more lenient measures compared to the previous quarter. By the second quarter, a gradual shift towards relaxation was evident, with six countries reducing their measures, including previously strict Vietnam. Despite this trend, Laos and Myanmar continued with moderate measures, reflecting a more cautious stance (Worldometer, 2024).

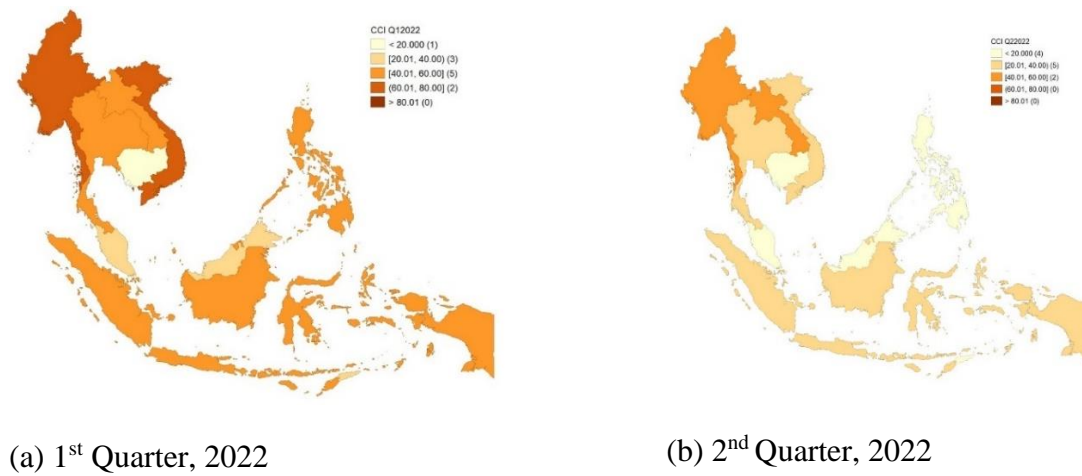


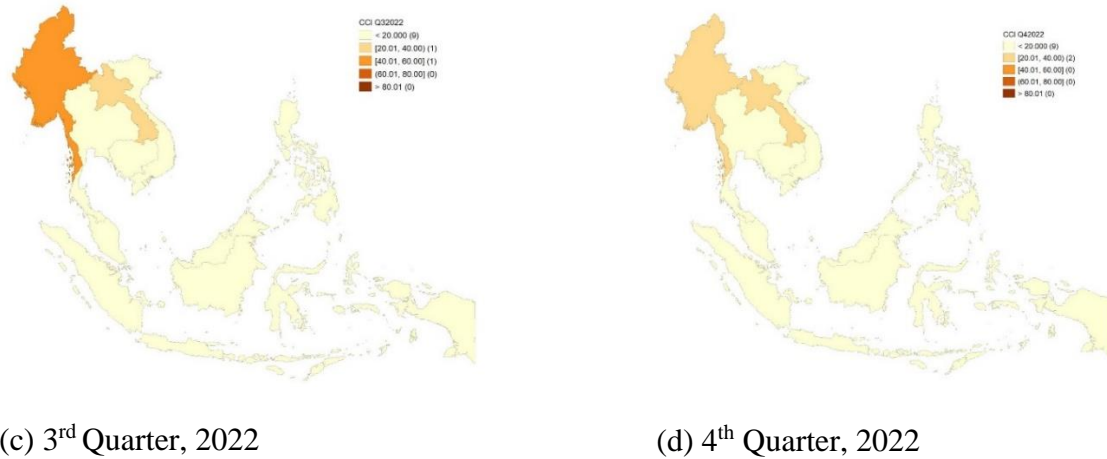
**Figure 1. Containment and Closure Policy Index Map of ASEAN Countries, 2020.**



**Figure 2. Containment and Closure Policy Index Map of ASEAN Countries, 2021.**

By the end of 2022, most ASEAN countries had minimal restrictions, with only Laos and Myanmar retaining some measures (in Figure 3). This widespread easing suggested a shift towards prioritizing economic considerations and confidence in handling the virus, but it carries increased transmission risks, particularly for vulnerable populations or those not fully vaccinated.

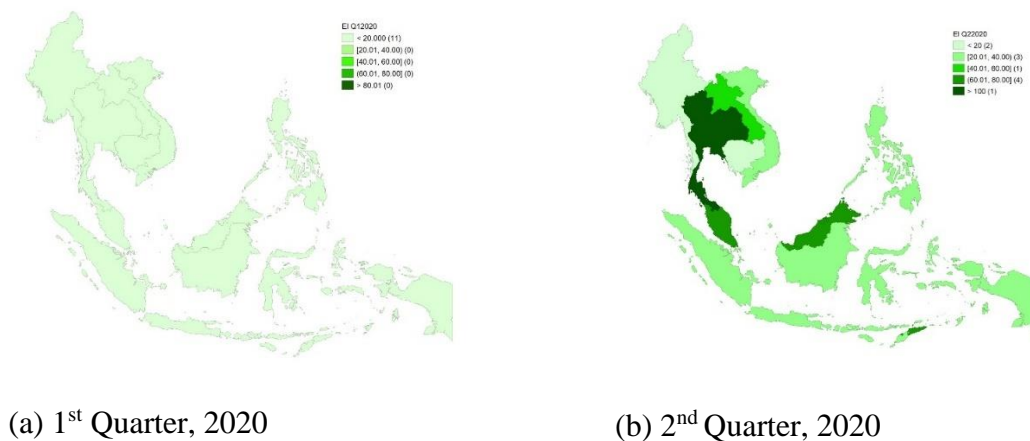




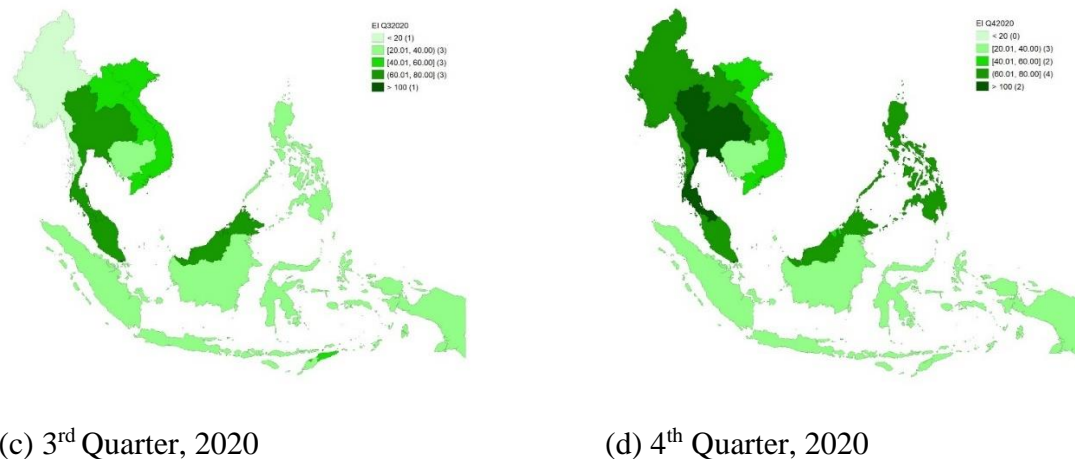
**Figure 3. Containment and Closure Policy Index Map of ASEAN Countries, 2022.**

### Economic Policy Measures to COVID-19 by ASEAN Countries

In the first quarter, ASEAN countries focused on public health concerns and economic impact assessment. By the second quarter, strategies began to diversify, with Cambodia and Myanmar focusing on minimal assistance. Indonesia, the Philippines, and Vietnam introduced humanitarian initiatives with limited economic support. Laos implemented moderate measures with substantial relief, while Brunei, Malaysia, Singapore, and Timor-Leste adopted solid economic interventions. Thailand took an aggressive approach with extreme measures. By the final quarter, Cambodia, Indonesia, and Timor-Leste focused on humanitarian initiatives with minimal economic assistance. Brunei and Vietnam implemented moderate measures with substantial relief, while Laos, Malaysia, Myanmar, and the Philippines transitioned to substantial fiscal and monetary stimulus (in Figure 4).

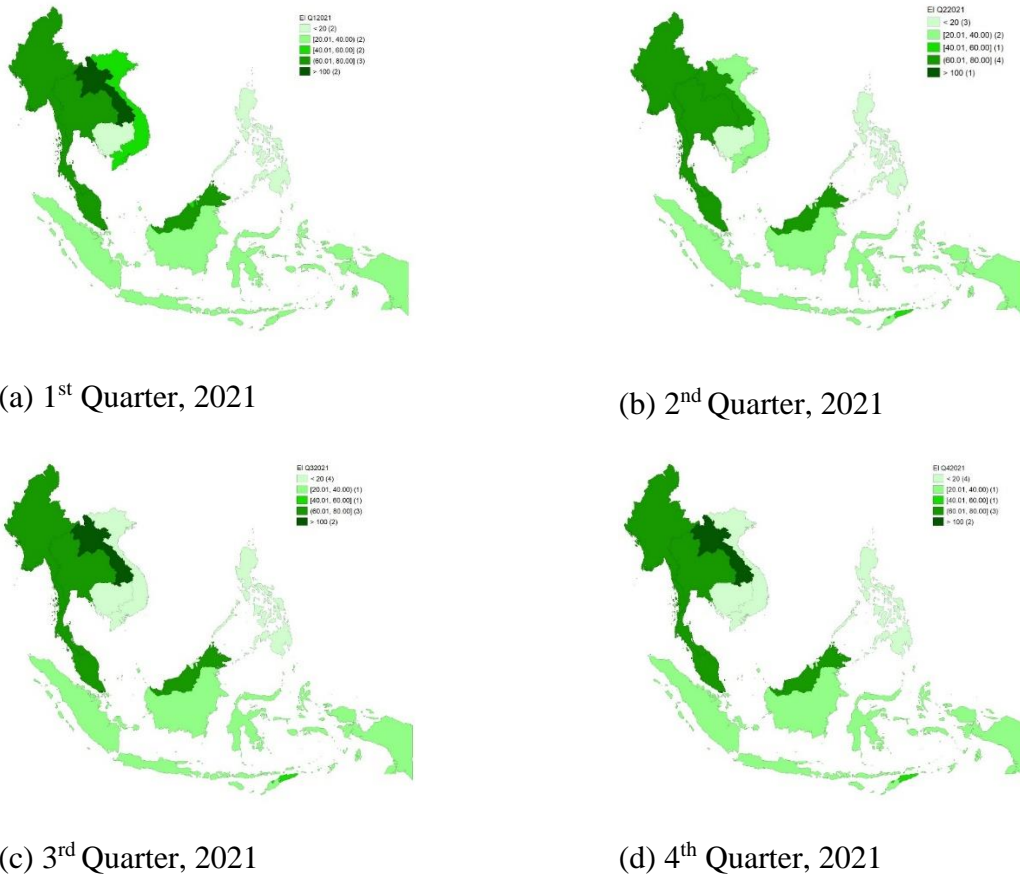




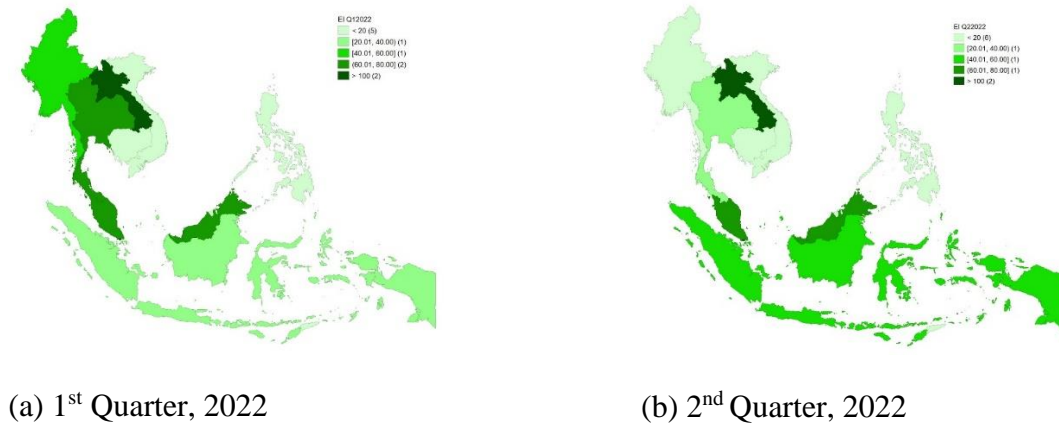


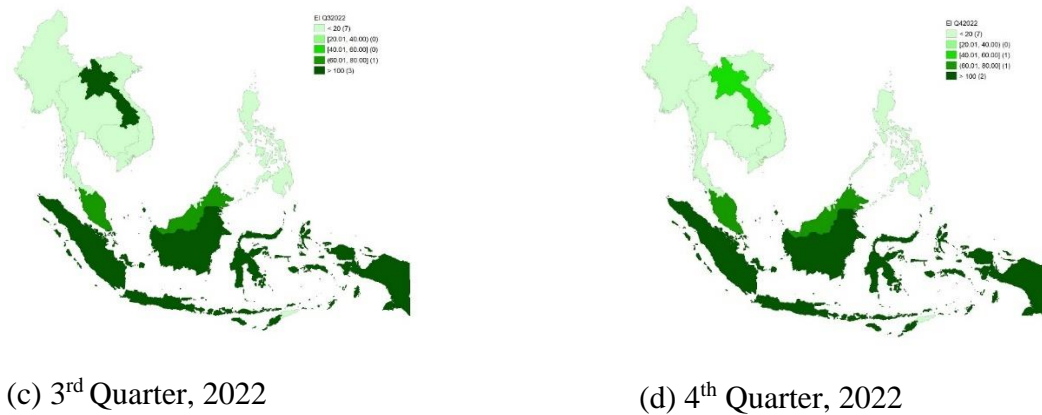
**Figure 4. Economic Policy Index Map of ASEAN Countries, 2020.**

In 2021, ASEAN countries responded differently to COVID-19, with changes observed in each quarter (in Figure 5). In the first quarter, Cambodia and the Philippines offered minimal financial assistance, while Indonesia and Timor Leste focused on humanitarian initiatives. Brunei and Vietnam provided moderate support, while Malaysia, Myanmar, and Thailand implemented substantial fiscal and monetary stimulus packages. Laos and Singapore adopted the most robust economic stimulus measures. In the second quarter, minimal financial assistance increased slightly, while Indonesia and Vietnam continued their limited aid alongside humanitarian efforts. Timor Leste moved to moderate support, while Laos, Malaysia, Myanmar, and Thailand maintained substantial stimulus measures. Singapore remained the only country with powerful economic stimulus. In 2022, ASEAN countries provided varying levels of economic policy support, with Brunei, Cambodia, the Philippines, Timor Leste, and Vietnam offering minimal or no financial assistance. Indonesia provided limited humanitarian aid, while Myanmar provided moderate relief. Malaysia and Thailand provided substantial fiscal and monetary stimulus, while Laos and Singapore implemented robust economic stimulus strategies. In the second quarter, six countries offered minimal financial assistance, while Thailand transitioned to limited aid. Malaysia continued substantial assistance, while Indonesia, Laos, and Singapore adopted extreme stimulus measures. In the third and fourth quarters, minimal financial assistance persisted for some countries, with Indonesia, Laos and Singapore maintaining solid economic measures (in Figure 6).



**Figure 5. Economic Policy Index Map of ASEAN Countries, 2021.**



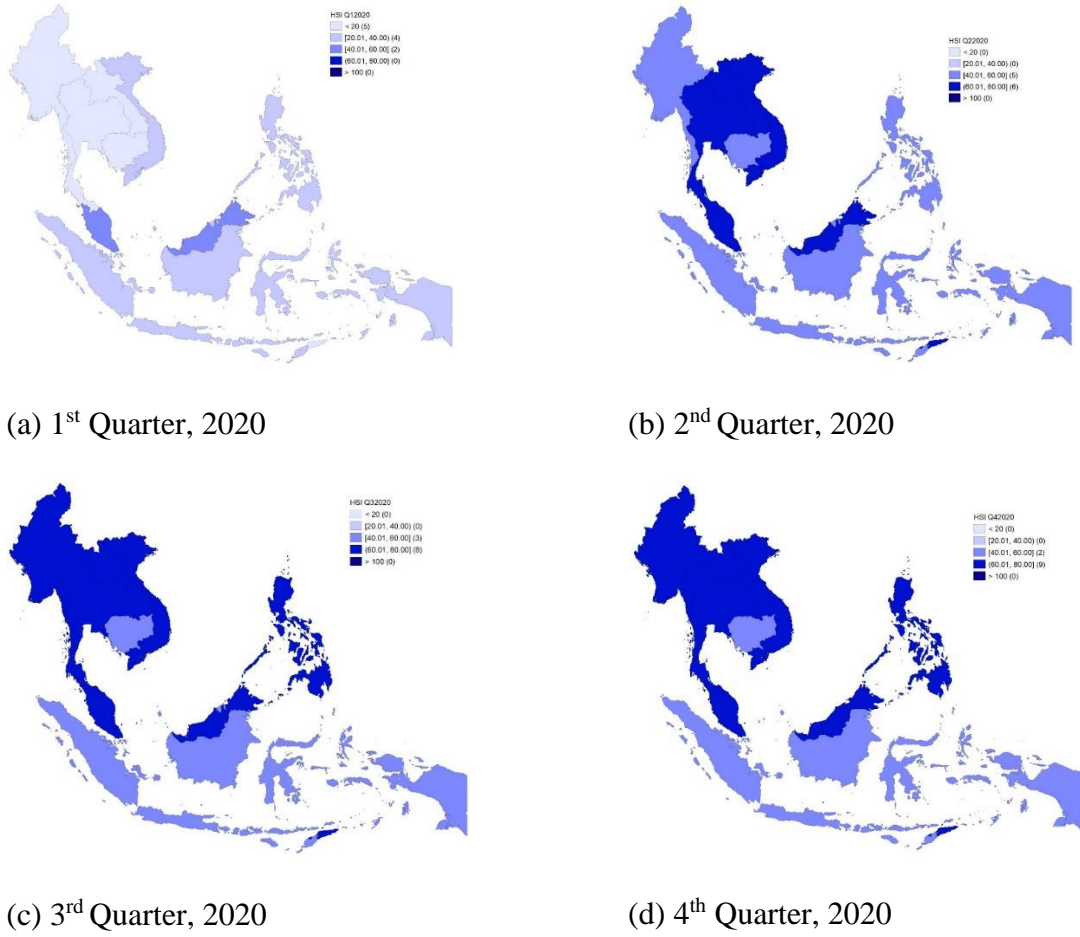


**Figure 6. Economic Policy Index Map of ASEAN Countries, 2022.**

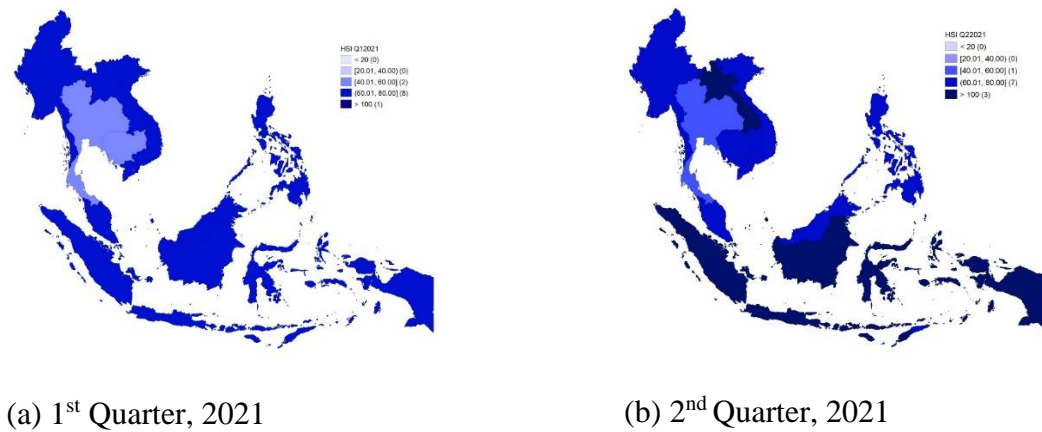
### Health System Policy Measures to COVID-19 by ASEAN Countries

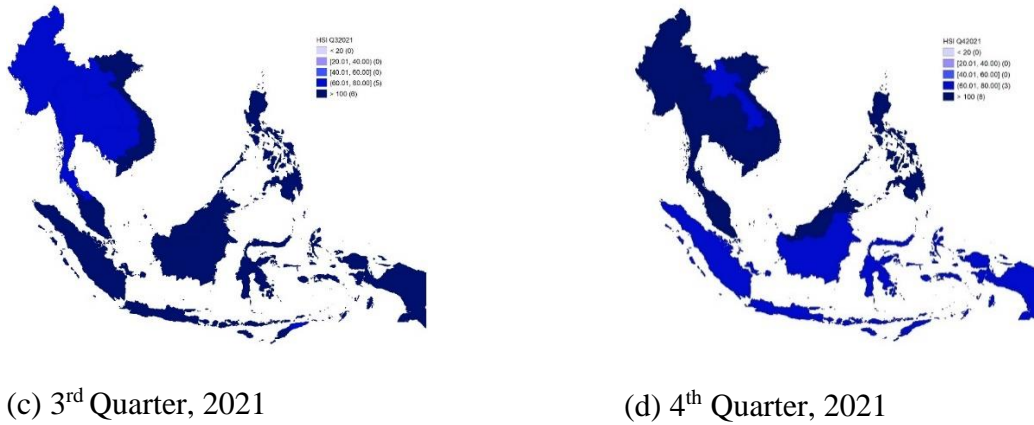
In 2020, ASEAN countries showed varying levels of healthcare system preparedness. Cambodia, Laos, Myanmar, Thailand, and Timor Leste faced challenges due to inadequate infrastructure and resources. Brunei, Indonesia, the Philippines, and Vietnam had better systems but needed improvement in pandemic management. Malaysia and Singapore were well-equipped for mild pandemics. By the second quarter, significant improvements were noted, with Brunei, Cambodia, Indonesia, Myanmar, and the Philippines showing substantial progress. However, progress stagnated in the third quarter, with Brunei, Cambodia, and Indonesia maintaining moderate preparedness levels. Despite these improvements, some countries need ongoing investment in healthcare infrastructure and resources (in Figure 7).

ASEAN countries have shown significant improvement in healthcare preparedness compared to the initial stages of the pandemic in 2021 (in Figure 8). Only Cambodia and Thailand remained well-equipped for minimal COVID-19 cases, while the rest were ready for many cases. Singapore excelled with a highly well-equipped system. Thailand's status remained unchanged in the second quarter, while Indonesia, Laos, and Singapore maintained extremely well-equipped status. By the end of 2021, only Indonesia, Laos, and Timor Leste remained prepared for many cases.

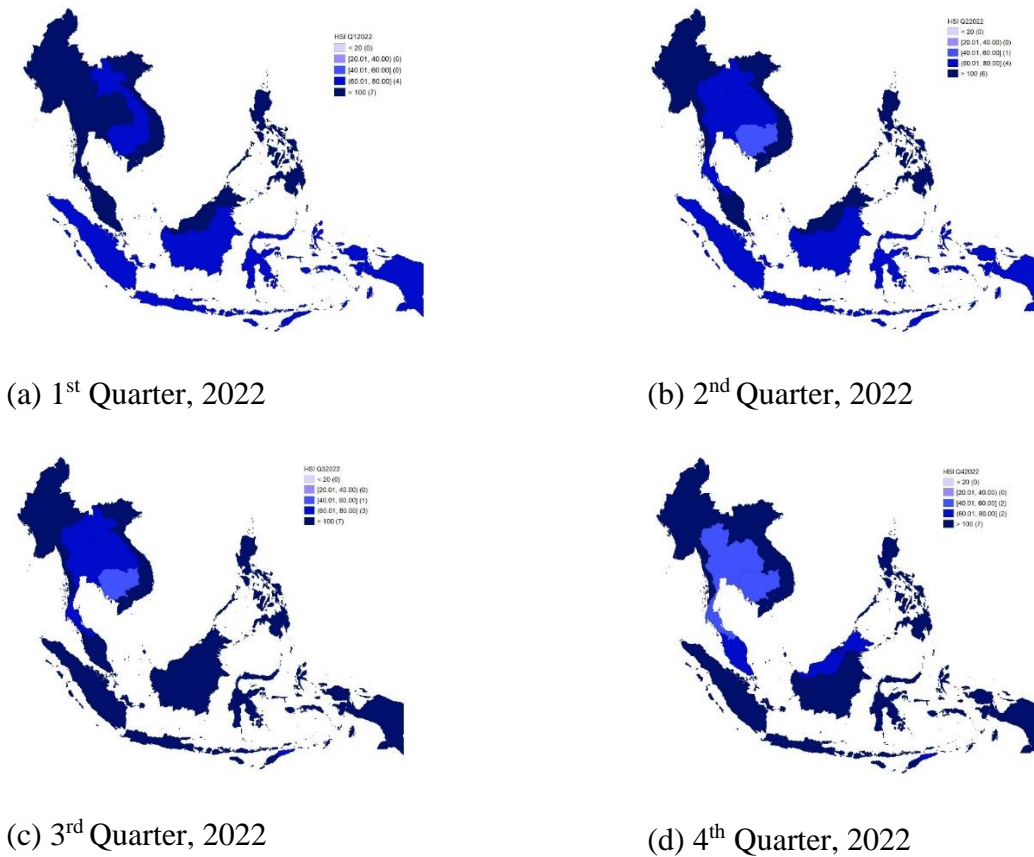


**Figure 7. Health System Policy Index Map of ASEAN Countries, 2020.**





**Figure 8. Health System Policy Index Map of ASEAN Countries, 2021.**



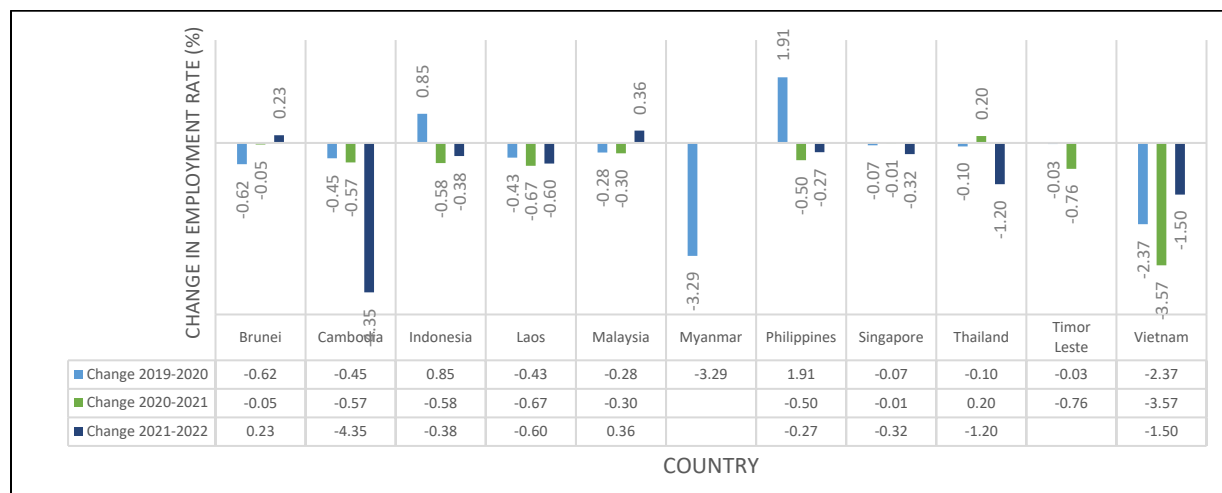
**Figure 9. Health System Policy Index Map of ASEAN Countries, 2022.**

In Figure 9, the ASEAN countries' health system policy map for the COVID-19 pandemic 2022 showed varying readiness levels. Cambodia, Indonesia, Laos, and Timor Leste showed readiness for many cases, while Brunei, Malaysia, Myanmar, Philippines, Singapore, Thailand,

and Vietnam had well-equipped systems. However, Cambodia's readiness decreased, and Thailand shifted towards large cases. Most countries maintained their measures in the third quarter, except Indonesia. By the fourth quarter, Cambodia and Thailand remained well-equipped for minimal cases, while Malaysia and Timor Leste improved their readiness for significant cases. The results suggest a positive measure of ASEAN's healthcare preparedness throughout 2022, but uneven progress highlights the need for continued regional collaboration. The lack of a consistent strategy across ASEAN may have impeded regional efforts, with inconsistent data reporting complicating comparisons and regional cooperation.

### Employment Rates of ASEAN Countries by Economic Sector

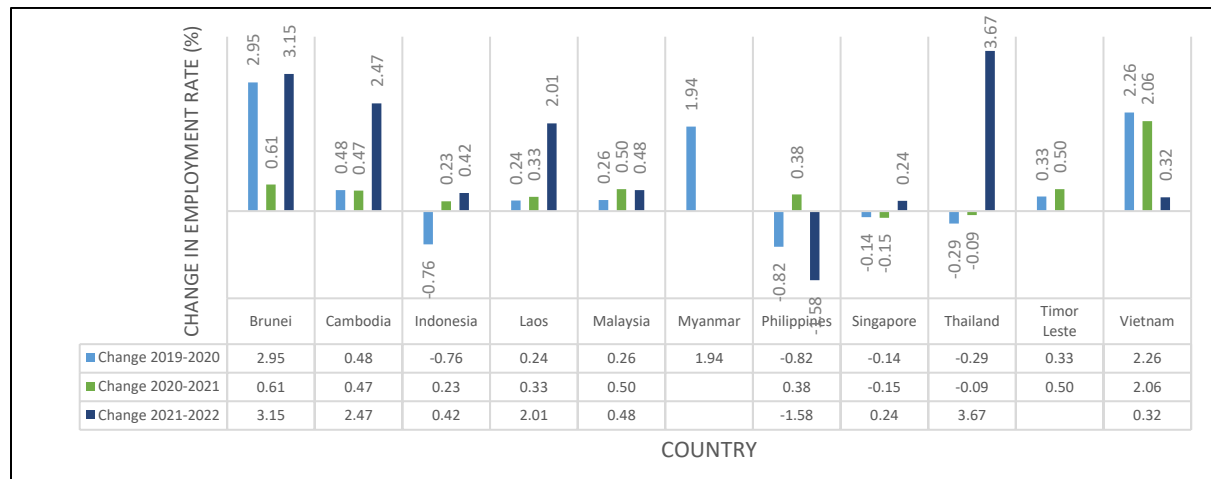
The study reveals that the impact of government policy responses to COVID-19 on employment rates in the agriculture sector in ASEAN countries varied significantly across the region (as shown in Figures 10-12). Most countries experienced declining employment rates, with Cambodia, Myanmar, and Vietnam experiencing the most significant declines. However, countries like Brunei and Malaysia showed resilience or recovery in the latter period (2021-2022). This variation could be attributed to the differing nature and effectiveness of government policies and the inherent resilience of each country's agriculture sector.



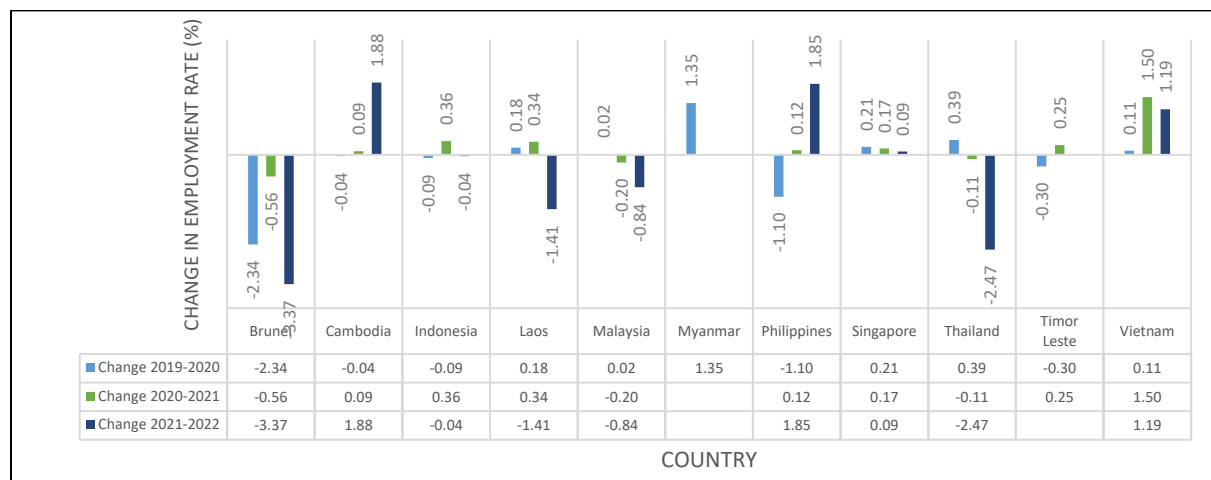
**Figure 10. Change in Agricultural Employment Rates of ASEAN Countries, 2019-2022.**

In the industry sector, most ASEAN countries experienced increased employment rates from 2019-2020, with Brunei having the highest increase (2.95%). However, the Philippines, Indonesia, Thailand, and Singapore experienced a downturn from 2019-2020. In 2020-2021, all ASEAN countries experienced increased employment rates, except for Singapore and Thailand. In the services sector, the COVID-19 pandemic significantly impacted the service sector, causing a decline in employment rates between 2019 and 2020. While a partial recovery emerged in 2020-

2021, most ASEAN countries registered a downtrend in service sector employment from 2021-2022.



**Figure 11. Change in Industrial Employment Rates of ASEAN Countries, 2019-2022.**



**Figure 12. Change in Services Employment Rates of ASEAN Countries, 2019-2022.**

### Effects of Government’s Policy Responses to COVID-19 on Employment Rates among ASEAN Countries

The study investigated the impact of government policy responses to COVID-19 on employment rates in six ASEAN countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Panel regression analysis was used to examine agriculture, industry, and services. As shown in Table 1, diagnostic tests revealed issues with model 1 (agriculture), suggesting a need for a fixed-effects model, while Models 2 (industry) and 3 (services) need to

used random-effects model. However, no multicollinearity was found, and all models failed to meet homoscedasticity requirements. The study used Newey-West robust standard errors to account for heteroscedasticity and autocorrelation, resulting in more reliable confidence intervals for the estimated impacts of government actions on employment rates.

**Table 1. Results in testing the assumptions of government responses to COVID-19 on employment rate models among ASEAN-6 countries**

Assumption	Test	Model 1	Model 2	Model 3
Endogeneity	Hausman Test ( $\chi^2$ )	20.68***	0.60	3.48
Multicollinearity	Variance Inflation Factor (VIF)	1.04	1.04	1.04
Homoscedasticity	Modified Wald Test ( $\chi^2$ )	2.8E+06***		
	Breusch- Pagan LM test ( $\chi^2$ )		374.32***	271.85***
Autocorrelation	Wooldridge Test (F-statistic)	20.372***	0.008	2.680

Note: \*\*\*significant at 1% level

This study investigates the impact of government responses to COVID-19 on employment rates in agriculture, industry, and services sectors of ASEAN-6 countries (in Table 2). The researcher used fixed-effects and random-effects regression models to assess the influence of containment and closure policies, economic policies, and health system policies on employment rates. Fixed-effects model showed that all government policy responses to COVID-19 were not statistically significant in agricultural employment rates, suggesting that policy measures influencing agricultural employment might have an indirect and longer-term impact. Lockdowns, for example, may disrupt agricultural input supply networks, affecting employment in the long run. Economic measures such as debt relief and income support may take some time to grant or execute for workers. Other factors, such as weather patterns, price variations, or pre-existing agricultural trends, might have impacted employment rates more during this period.

Random-effects models showed that the government's responses to COVID-19, such as economic and health system policies, were not statistically significant in industrial employment rates among ASEAN-6 countries. However, containment and closure policy response to COVID-19 on industrial employment rates was statistically significant at a 5% level, suggesting that stricter containment and closure policies by one index point slightly decreased the industrial employment rates of ASEAN-6 countries very slightly by around 0.004%. Moreover, the results of a random-effects model revealed that the government's responses to COVID-19, such as economic and health system policies, were not statistically significant regarding service employment rates. However, containment and closure policy response to COVID-19 on services employment rates was statistically significant at a 10% level. This result means that stricter containment and closure policies by one index point decrease the services employment rates of ASEAN-6 countries very slightly by 0.013%.



The study found that a substantial portion of the variance for agricultural, industrial, and services employment rates is due to between-country differences among ASEAN-6 countries, suggesting that additional factors may have a greater impact on employment rates. The study also investigated the relationship between error terms and regressors of the models, finding no meaningful relationship between the error terms and the regressors. Additionally, this study employed the F-statistic to determine if the combined effect of the policy variables on the employment rates is statistically significant. In this case, this study failed to reject the null hypothesis that the policy variables had no overall influence on the employment rates.

**Table 2. Results of fixed and random effects regression models on the effects of government policies in response to COVID-19 on employment rates of ASEAN-6 countries.**

Variable	Coefficient		
	Model 1	Model 2	Model 3
Containment and Closure Policy	0.0025995 <sup>ns</sup>	-0.0038931 <sup>**</sup>	-0.013442 <sup>*</sup>
Economic Policy	0.0027965 <sup>ns</sup>	0.0016709 <sup>ns</sup>	-0.0021553 <sup>ns</sup>
Health System Policy	-0.0049452 <sup>ns</sup>	-0.0053184 <sup>ns</sup>	0.0010634 <sup>ns</sup>
(Constant)	20.38494 <sup>***</sup>	27.20427 <sup>***</sup>	53.14373 <sup>***</sup>
	Value		
sigma_u ( $\sigma_u$ )	13.671263	12.260213	12.583013
sigma_e ( $\sigma_e$ )	1.7110211	0.58972446	1.0046509
rho ( $\rho$ )	0.9845779	0.99769167	0.99366566
R-squared:			
Within	0.0057	0.0423	0.1066
Between	0.1643	0.0274	0.0628
Overall	0.0317	0.0103	0.0023
corr ( $u_i, xb$ )	-0.1903	0	0
F-statistics	0.22 <sup>ns</sup>	4.75 <sup>ns</sup>	3.63 <sup>ns</sup>

\*\*\*, \*\*, \*significant at 1%, 5% and 10% levels, respectively      <sup>ns</sup> not significant

#### IV. Conclusion

Based on the results of the study, this study draws the following conclusions. The study reveals that most ASEAN countries implemented less stringent measures in the first quarter of 2020, but tightened them in the second half due to the increasing number of COVID-19 cases. Most countries gradually eased restrictions in the second half of 2020, continuing into 2021 and 2022, with minimal or no measures implemented by most countries until the end of 2022. This shift reflects the possibility of adjusting strategies based on factors such as an evolving understanding of the virus, vaccination rates, economic considerations, and perceived control over the pandemic. At the beginning of 2020, ASEAN countries established financial support programs for improvement. In the second half of 2020 and early 2021, strategies diversified, with some

countries prioritizing humanitarian efforts and providing limited economic support. Financial support decreased in 2022, suggesting a shift towards longer-term economic recovery measures such as infrastructure development and increased regional cooperation. Significant variations in healthcare delivery among ASEAN countries in 2020 were observed, with most countries showing improvements in 2020 and 2021. Most countries maintained positive development in 2022, but in some cases, progress has stagnated or declined, highlighting the need for further efforts.

The COVID-19 pandemic has significantly impacted employment in ASEAN countries, with employment rates recovering by 2022. The agriculture sector experienced declines due to movement restrictions and border closures, while the industry sector saw an increase between 2019 and 2022. However, trends varied across countries, with some showing stable growth and others experiencing fluctuations. The services sector's reliance on ASEAN countries varies significantly, with some countries experiencing solid growth and others facing declines.

Economic and health system policies were not statistically significant regarding industry and service employment rates among ASEAN-6 countries. Stricter containment and closure policies slightly decreased industry and services employment rates, reflecting the adverse impacts of lockdowns and business closures on the manufacturing industry. The study reveals that significant variance in agricultural, industrial, and services employment rates is due to regional differences among ASEAN-6 countries, suggesting additional factors may impact employment rates. The study also found no significant relationship between error terms and regressors and failed to reject the null hypothesis that policy variables had no overall influence on employment rates.

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