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The Initial Fiscal Policy Response to Covid-19 In Malaysia: The Impact of Government Spending on Healthcare Sector Using Dynamic Panel Data System GMM Estimation Analysis

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Abstract. The purpose of this study is to examine empirically the effect of government spending on healthcare systems on malaysia's economic growth during the early stages of the Covid 19 epidemic. Even as society became aware of the potential dangers of Covid 19, there has been a massive effort to rapidly increase capacity in the healthcare system. In Malaysia, in addition to emphasising the importance of strict adherence to the Movement Control Order (MCO), the government announced an immediate increase in funding for healthcare services as part of the initial phase fiscal policy reply to the Covid 19 outbreak. This study employed Dynamic Panel Data, also identified as a longitudinal study, and collected data over a four-month period, from December 2019 to March 2020, in five Asian countries involved with Covid 19. This study discovered that the Dynamic Panel Data System GMM Estimation model is suitable for interpreting the results, indicating that government expenditure on Covid-19 (p-value=0.036), unemployment rate and inflation rate have a significant relationship with healthcare sector growth of 1%, 2%, and 5%, respectively. In terms of limitations, such a study only focuses on four months of data from selected Asia countries participating in Covid-19. The findings of panel causality recommend that there are bidirectional links between healthcare sector growth and government spending. Empirical findings suggest that fiscal policy reforms are required to channel healthcare industry growth to increased government spending as a result of Malaysia's fiscal policy.

Keywords: COVID-19, Fiscal Policy, Government spending, healthcare sector, dynamic panel model, Malaysia.

INTRODUCTION

The government's immediate priority was to stop the Covid 19 epidemic from spreading further. Malaysia announced an RM53 billion coronavirus stimulus package to assist Movement Control Order-related companies and public in surviving the crisis. Malaysia's Health Ministry would then obtain RM500 million in funding, with the government allocating an additional RM1 billion to hire health experts and purchase equipment to combat Covid 19. Acknowledging front-line healthcare workers' sacrifices, the government will provide a special stipend ranging from RM400 to RM600 per month until the epidemic is over. Furthermore, the government has decided to provide an RM200 monthly stipend to police, military, civil defence, customs, and RELA members who are directly involved in enforcing the MCO. It is estimated that 169,000 front-liners will benefit from these allowances. Finally, insurance and takaful companies will offer a three-month premium moratorium to factors that contribute influenced by the pandemic. In the meantime, in Wuhan, China, a lack of protective medical supplies and a lack of knowledge about COVID-19 were the primary causes of a large number of healthcare workers contracting the virus in the early stages of the outbreak.

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Because of a lack of medical supplies, the cost of health care benefits increased during Covid 19. As a result, a large amount of government spending was obtained in order to implement a stimulus plan focused on the healthcare sector. Spending has been appropriately directed toward providing acute-care capacity, ventilators, and stocks of other critical medical materials, such as personal protective equipment. Fiscal policy, according to Keynesian and Endogenous growth theories, plays a critical role in accelerating economic growth. The majority of previous research on the relationship between economic sector growth and government spending has found that government expenditure can positively influence sector growth in a variety of ways. Government healthcare spending can boost growth by providing public goods that are a main component of aggregate demand. According to the findings of the study, high sector growth in the global economy can be achieved by investing more in human resource development and less in military and other non-development activities. According to Asghar et al. (2011), the resources allocated to health and education sectors are increasing the growth of the healthcare sector, and the government should implement policy to attract the private sector investment more in education and health. Baffes and Shah (2013) first attempted to establish a link between various types of government spending and military sector growth. According to the findings, the elasticity with regard to human resource capital and infrastructure is highest and lowest, respectively. According to Knack and Keefer (1995) and Keefer and Knack (1997), government expenditure on enforcing contracts, a legislation again for rights protection, and conflict resolution is beneficial to increasing sector growth.

METHODOLOGY

All the selected Asia nations observed from December, 2019 to March, 2020 4 months' time period which is from China, Singapore, Indonesia, Malaysia and Philippine. The data are taken from the World Bank, Trending Economic Website and UCNTAD database had included in this research and all the data used in this study are using secondary data. Then, the 4 months data being transferred to Stata 12 software in order to do the test. All test that was used is Panel Root Test (Im-Pesaran-Shin test) and diagnostic test (Wald test, Sargan test and Arrelano-Bond test 1 & 2). While result of these tests is defined after went through Dynamic Panel Data System GMM estimation Result for All Panel.

The panel unit root test is the first step in panel data analysis before reaching a result. This test is used to determine the stationery properties of the variables in question. There are numerous methods for performing panel unit root tests. Notwithstanding, this research is using only two test which is IPS test and Levin, Lin &Chu (LLC) test. Both tests are used because there is no significant evidence of error cross-section dependence in the data. Furthermore, according to (Gezahegne, 2011), LLC and IPS are the most commonly used tests, and both are based on the Augmented Dickey-Fuller (ADF) principle. The LLC test forecasts the heterogeneity of different sections. However, due to serial correlation, the test has low power in small samples, which cannot be completely eliminated. While for IPS, the heterogeneity is allowed and it make this test is more general in the dynamics. As a result, in the case where imposing uniform lag length is not appropriate, it is likely that heterogeneity is allowed in choosing the lag length in ADF tests. The results of the panel unit root tests for each variable are shown in the table below.

TABLE 1: Panel Unit Root Test(Im-Pesaran-Shin (IPS))

	Im-Pesaran-Shin (IPS)	
Variable	**Constant & trend**	**Constant & trend**
Healthcare Sector (%)	34.27**	35.05**
Government spending (Healthcare Sector)	73.01***	71.10***
Inflation Rate	10.26	10.26
Interest Rate	-3.20***	-3.20***
Unemployment Rate	15.53***	15.73***

Notes: *All panel unit root tests were performed with restricted intercept and trend for all variables. In addition, *, **, and *** indicate significance at the 1%, 5%, and 10% levels of p-value respectively.*

In table 1, the result shown is about two root test among dependent variable, constant variables and independent variable. Generally, the IPS test shows that dependent variable of net healthcare sector growth stated that significant at 5% level in constant and regulatory quality while in constant but no trend is significant at 10% level. The significant level of 10% is also same goes for all result tested among three constant variable which is inflation rate, interest rate and unemployment rate whether in constant and trend, and in constant but no trend. As the Table 1, it can be concluded that most of the variables giving significance impact towards the dependent variables in panel unit root test. Next, the significance result of initial independent variable which is government spending is significance towards dependent variable shows in Table 2. This result seems to be similar to the study by (Binuyo, 2014), that is found that there is positive relationship which is he found happened between government spending and healthcare sector growth. While next constant variable that also giving positive relationship is the inflation rate. As refer to the study by (Noveria, 2014) the result also showing significance result after the researcher studying the relationship between healthcare sector growth and inflation rate where the result is below than 1% level. Same goes to unemployment rate where the significance effect only on the healthcare sector growth. Lastly, all the GMM result is tested with the causal relationship, validity of the instruments and autocorrelation using three diagnostic tests.

TABLE 2*: System GMM Estimation Result*

	Panel Healthcare Sector
Government spending (Healthcare Sector)	0.009* (0.008)
Inflation Rate	0.031** (0.022)
Interest Rate	0.077*** (0.044)
Unemployment Rate	0.752 (7.722)

Note: **, ** and *** show significance at 1%, 5% and 10% significance levels, respectively.*

Based on the table above, Table 2 involve of healthcare sector growth as the dependent variable. The p-value is considered affecting the dependent variable with significance level of 1%, 5% and 10%. Overall, the result shows that, most of constant variable is significance. Same goes to the independent variable that is having significance result as well, the result shows that government spending during Covid 19 as the independent variable is increase 1% based on p-value, and this will give impact towards dependent variable as much as 5%. Next, the increasing of 1% level of inflation rate will affect healthcare sector growth about 5%. Moreover, for unemployment rate, the increasing level is about 1% and it gives impact as much as 0.2% towards healthcare sector growth. However, one of constant variable which is unemployment rate is showing that it is insignificance with p-value of 0.752. After GMM estimation result was conducted, the next test in order to confirm the results by using Wald test, Sargan test and Arellano test 1 and 2. Wald test was used to find the causal relationship exist between two variables. While for Sargan test, the propose of this test is regarding on the issue that GMM method shows that there also occur certain weaknesses that have initial relation to the goodness of the instruments and accuracy of the primary assumption of no serial correlation in the errors as referred by (Gezahegne, 2011). As a result, the Sargan test is used in this study to assess the validity of the instruments used. The Arellano-Bond tests 1 and 2 are used to determine whether or not autocorrelation exists in first differences.

TABLE 3*: Wald Test, Sargan Test, AR(1) & AR(2) Test*

	Healthcare Sector
Wald test	1115.52 (0.0000)*
Sargan test	7.567 (-2.0000)
Arellano-Bond test for AR (1)	1.479 (-0.4521)
Arellano-Bond test for AR (2)	1.7901 (0.0223)**

Note: *The AR2 test is the Arellano–Bond test for the existence of the second-order autocorrelation in first differences. ***,** and * show significance at 1%,5% and 10% respectively*

Based on diagnostic test in the above table, the result of the Wald test shows that the null of all independent variable and constant variables is giving impact at 1% level towards healthcare sector growth. For the Sargan test, the test showing that there are no autocorrelation. As can be seen, the autocorrelation test in table 3 reject the null hypothesis of no autocorrelation. This result is determine through the presence of autocorrelation at 1%, 5% and 10% respectively. Therefore, the Arellano-Bond test is rejected the null hypothesis for Panel healthcare sector growth in the first test of autocorrelation. However, the autocorrelation test is misleading due to the time rejects the null hypothesis and this will make the test is not dependable. As mentioned by (Roodman, 2017), in order to only depend on first autocorrelation is not certain as it interpret the presence of autocorrelation. Moreover, to get more precise, there is a need to test the autocorrelation for the second time. As the Arellano-Bond test 2 have been made, the result shows that this Panel have no problem in term of serial correlation.

FISCAL POLICY ON COVID 19

The authority must reallocate and prioritise its expenses on law and order in order to achieve success in eliminating the law and order situation faced by the demand on the health system, which can protect healthcare systems from becoming overburdened, and mortality from Covid 19 will be significantly lower. Unlike the 2008 global financial crisis and the Asian financial crisis in 1997, the Covid 19 crisis is first and foremost a public health crisis, followed by an economic crisis. This implies that government spending on human capital and community services should be prioritised in order to promote Malaysia's health sector growth. The equitable and proper delivery of health care services is regarded as critical in having achieved health-related government expenditure objectives. The government aims to reduce its spending on subsidies because it is inflationary and causes other economic and social problems in the country, impeding the process of economic growth. Following that, economists generally agree that economic policy should primarily focus on strengthening healthcare efforts to combat the pandemic while also ensuring the welfare of the poorest and businesses. Effective policies for trying to promote human capital formation, economic and community services in Malaysia are required to be developed and implemented for this purpose. Government spending on law and order and sector growth may be related in either a positive or negative way. Numerous studies have found a positive relationship between health and economic growth. Human capital expenditures may have a positive impact on economic growth. A stable legal and political environment protects individual and property rights, attracts FDI, and provides strong incentives for domestic investors to invest. Improved health leads to increased life expectancy, which means more opportunities for workers to work more and earn more money. The state of law and order in a country has a significant impact on people's living conditions. Another important type of human capital is health. This stimulates economic activity and creates job opportunities for the people.

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