COVID-19: The Macroeconomic Impact

Ziteng Li

School of Economics, University of Queensland, Queensland, Australia.

1302178153@qq. com

Abstract

This paper examines the economy of Singapore before the epidemic, the long- and short-term effects of the government's non-economic policies on the economy, and compares it to the Asian financial crisis of 1997. The final section of the article examines the purpose, effectiveness, limitations, and potential drawbacks of the Singapore government's anti-epidemic monetary policy.

Keywords

Epidemic; Noneconomic policy; financial crisis; government; Anti-epidemic monetary policy.

1. Introduction

This paper examines the economy of Singapore before the epidemic, the long- and short-term effects of the government's non-economic policies on the economy, and compares it to the Asian financial crisis of 1997. The final section of the article examines the purpose, effectiveness, limitations, and potential drawbacks of the Singapore government's anti-epidemic monetary policy.

2. The Economy Before the Pandemic

Singapore is an important financial, service and shipping centre in Asia and one of the richest countries in the world. And Singapore has the 12th largest per capita GDP in the world (International Monetary Fund 2021). From 2010 to 2019, Singapore's unemployment rate remained stable at around 3% all the year round, never exceeding 4%. During the period from 2014 to 2019, Singapore's price index fluctuated slightly, basically stabilizing at 98 to 100(International Monetary Fund 2021). All the above three points have laid a foundation for Singapore to resist the epidemic.

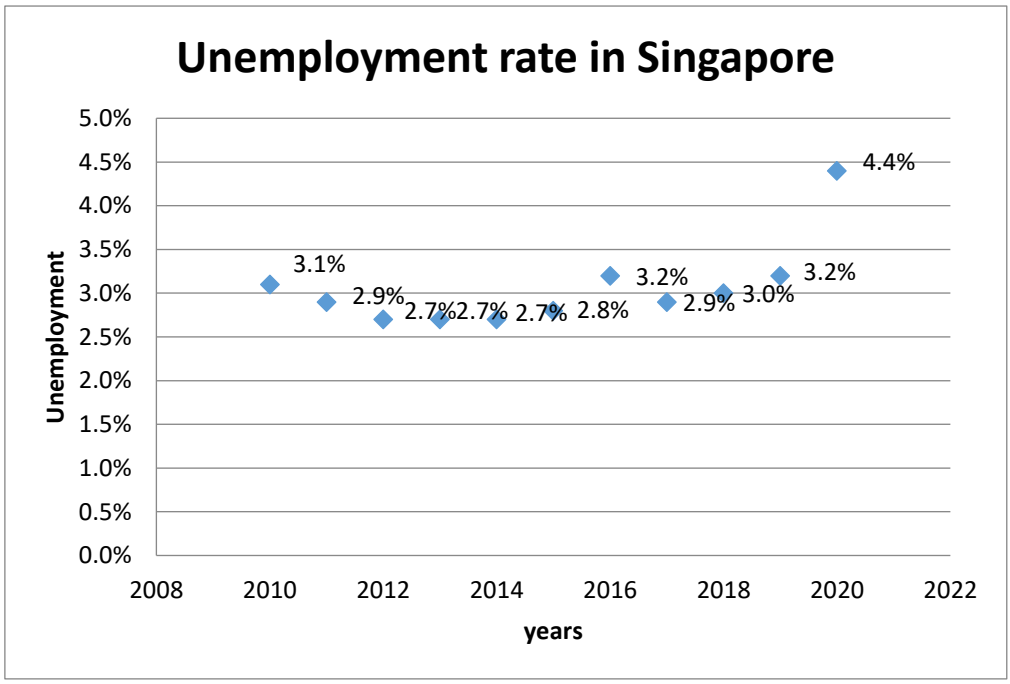

Fig. 1 Resources from: Singapore Department of Statistics

In addition, there are some economic problems in Singapore, which have exacerbated the impact of the epidemic. First of all, as a small open economy, Singapore is very sensitive to changes in the international environment. Due to international factors such as Sino-US trade friction, Singapore's economy grew by 0.7% year-on-year in 2019, which was the worst performance in 10 years (Fiscal Policy Response 2020). Secondly, Singapore has a population of 5.69 million and a labour force of 3.61 million. However, more than 1.2 million people are engaged in the following three industries: social and personal services, business services, wholesale and retail trade (Monetary Authority of Singapore 2021). As a result, Singapore's industrial structure is relatively simple and vulnerable to the influence of the world economic environment.

3. The Impacts of the COVID-19 Shocks

In the short run. The most direct impact of the epidemic is reflected in the labour force in Singapore. Due to the infection of COVID-19, some labourers died or lost their ability to work, which led to the decline of the overall labour force level in Singapore. On March 27, 2020, the Singapore government started implementing strict 'circuit breaker' in order to prevent the epidemic from spreading further (Zhao & Qian 2020). A large number of hotels and entertainment venues were forced to close, and the home office rules were strictly enforced, with harsh punishments levied on workers and employers who violated them. These policies successfully halted the spread of the Pandemic, but they also resulted in a significant number of unemployment of workers for temporary. Singapore's labour input fell by 0.9 precent in 2020, as did workers' income; the monthly median income fell from S $4,563 to S $4,534 (Singapore Department of Statistics 2021). With the decrease of household income, people began to reduce unnecessary consumption and increase savings. Furthermore, a substantial amount of capital (equipment, warehouses, etc.) had to be idled or shut down. Singapore's capital input percentage fell to its lowest level in ten years in 2020.

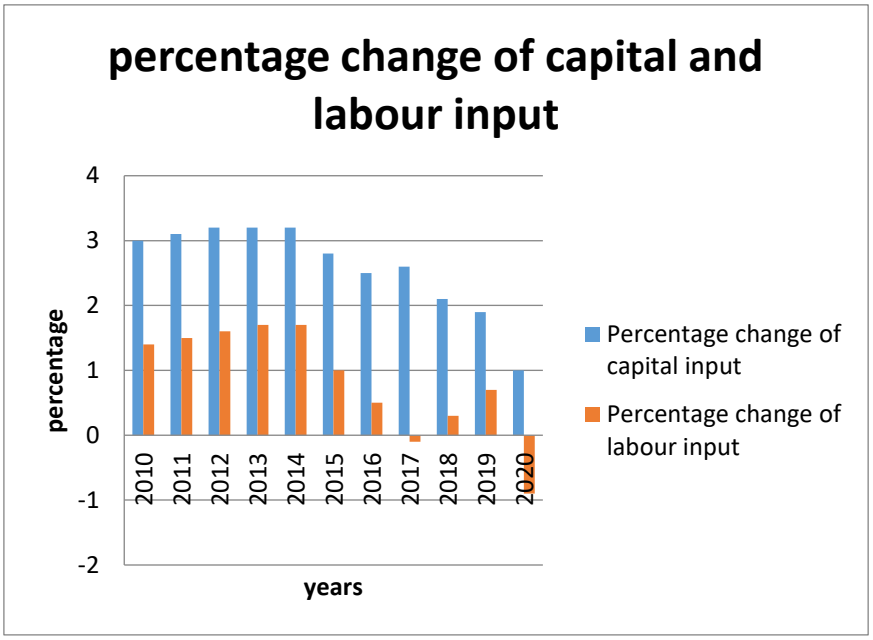

Fig. 2 Resources from: Singapore Department of Statistics

The Singapore government has imposed tighter border controls to limit cross-border movement of people since April 7, 2020, resulting in the near-complete shutdown of international trade and cross-border tourism. The aviation industry took the brunt of the blow, with 96 precent of flights cancelled and a 25 precent drop in tourist numbers by 2020(Singapore Government 2021). Furthermore, the suspension of trade resulted in a significant rise in import prices (Zhao & Qian 2020).

In the long run. Since the epidemic has not been effectively controlled in a timely manner around world, it has brought a long-term negative impact on Singapore's economy. The most obvious manifestation is that a significant number of jobs have transitioned from temporary layoffs to

permanent unemployment, and the unemployment rate will remain relatively high in the long run. Furthermore, workers' income and productivity will decrease over time, and Singapore will take a long time to restore workers' income and overall output.

According to the production function Y=F (K, L), the output will be reduced in the same scale since the epidemic reduces the input of labour and capital. Furthermore, according to Okun's law, Singapore's real GDP will be 2.4% lower than its potential GDP due to the 1.2% increase in unemployment rate (Mankiw 2019, p. 376). Keynesian cross can also be used as evidence, as unnecessary consumption decreases, both planned and actual expenditures decrease. Due to the decrease of output and the unadjusted real interest rate in the short term, according to the IS-LM model, the IS curve and LM curve move to the left together, and the moving distance is equal. According to IS-LM model, the new equilibrium point has lower output and equal real interest rate compared with the original equilibrium point. The AD curve shifts to the left in the AD-AS model as people's excessive consumption decreases. Furthermore, as a result of the epidemic's long-term effects, Singapore's production and real GDP fell, and the LRAS curve shifted to the left (Mankiw 2019, p. 374). There will be a same price level and lower output at the new equilibrium point.

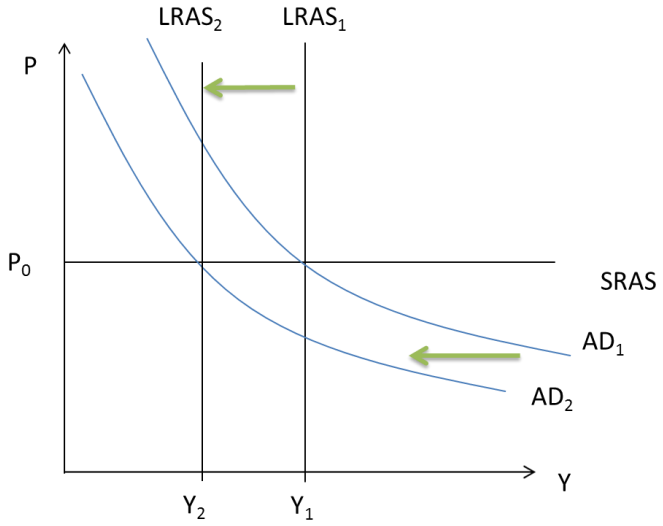

Fig. 3

There are numerous parallels and differences between the shocks of epidemic on Singapore and the 1997 Asian Financial Crisis. The similarity lies in that both shocks caused a large number of enterprises in Singapore to go bankrupt, resulting in a decrease in jobs and an increase in unemployment rate (Fiscal Policy Response 2020). Furthermore, both shocks caused Singapore's GDP growth to slow or even enter a recession. The difference is that the underlying causes of the two shocks are not the same. The epidemic is a natural disaster that is uncontrollable. The economic bubble caused the Asian financial crisis in 1997 (Fiscal Policy Response 2020). Furthermore, the epidemic caused Singapore to lose a portion of its labour force, whereas the 1997 financial crisis had no such effect.

4. The Policy Responses

Singapore acted quickly in response to the epidemic. A 4 billion Singapore dollar ‘economic stabilization and support package’ and a 1.6 billion Singapore dollar ‘Care and Support Package’ were used to secure the economy and people's livelihoods (Zhao & Qian 2020).

The economic stability and support package’s key goal is to stabilize the economy and employment, and the main steps are as follows: 1. the government assists or replaces enterprise employees in paying a portion of their salaries. 2. The government and enterprises share the salary increase of employees. 3. The government offers direct assistance to the industries that have been adversely affected(Zhao & Qian 2020). There are certain limitations to the measurement of economic stability and support

package. While it aids in the alleviation of business economic pressures, it does not address the root causes of labour shortages, as well as the decrease in total output and production efficiency.

The purpose of Care and Support Package is to help families and individuals in Singapore meet the necessary living expenses and create employment opportunities. Specific measures include providing cash incentives, GST voucher-U Save, and other ways to maintain the national standard of living for households, low-income residents, and the unemployed, as well as providing skills training subsidies for citizens to their vocational skills (Zhao & Qian 2020).The fact that the epidemic has reached various parts of Singapore reflects the limitations of Care and Support Package. For regions with a greater effect on the disease, the cash subsidy should be increased. Second, subsidies for skills training should be more focused to ensure that these industries maintain their international leadership role in the future.

'economic stabilization and support package', and 'Care and Support Package', these two policies are extremely effective, as evidenced by Singapore's unemployment and productivity in each quarter of 2020. As a result of the epidemic, total employment in Singapore will decline by 25,400 and 113,500 in the first and second quarters of 2020, respectively (Monetary Authority of Singapore 2021). The employment decline pattern in Singapore in the third and fourth quarters of 2020 has eased, and the employment decline in the third and fourth quarters is only 34,400 and 7,800, respectively, due to employment support and skills training support. In the second quarter of 2020, Singapore's productivity was most seriously affected by the epidemic. However, after the employment support policy, the productivity in the third quarter only decreased by 2.5%, and the productivity increased positively (2.4%) in the fourth quarter (Singapore Department of Statistics 2021). The data of employment quantity and productivity in the four quarters of 2020 can prove that Singapore's policy response is highly effective.

Table 1 Resources from: Singapore Department of Statistics

	employment change ('000)	productivity
Annual	-181.0	-13.3
1st Qtr	-25.4	-1.3
2nd Qtr	-113.5	-11.9
3rd Qtr	-34.4	-2.5
4th Qtr	-7.8	2.4

The fiscal policy implemented in response to the epidemic is not flawless, and there are certain potential drawbacks that could jeopardize Singapore's economic recovery in the future. First, a significant number of subsidies pushed up government debt, which hit S $7,287.65 million in the first quarter of 2021, an increase of 13.6% compared with the fourth quarter of 2019 (the government debt before the epidemic was S $6,410.94 million) (Singapore Department of Statistics 2021). If the government debt remains high for an extended period of time, it will have a negative impact on economic recovery. As a result, the government debt crisis can only be solved in the future by cutting government spending and raising taxes.

According to Keynesian cross and consumption function (C=MPC(Y-T)), if government expenditure is cut and tax level is raised, planned expenditure and real GDP will decrease together (Mankiw 2019, p. 386). According to the IS-LM model, the IS curve shifts to the left since real GDP falls while the real interest rate remains unchanged. The real interest rate falls as the IS curve shifts to the left. Compared with the original equilibrium point, the new equilibrium point of IS curve and LM curve has lower real interest rate and lower real GDP. This also suggests that Singapore's real interest rate and GDP growth rate will remain low for a long time, which is not conducive to the overall economy's recovery and development in the future.

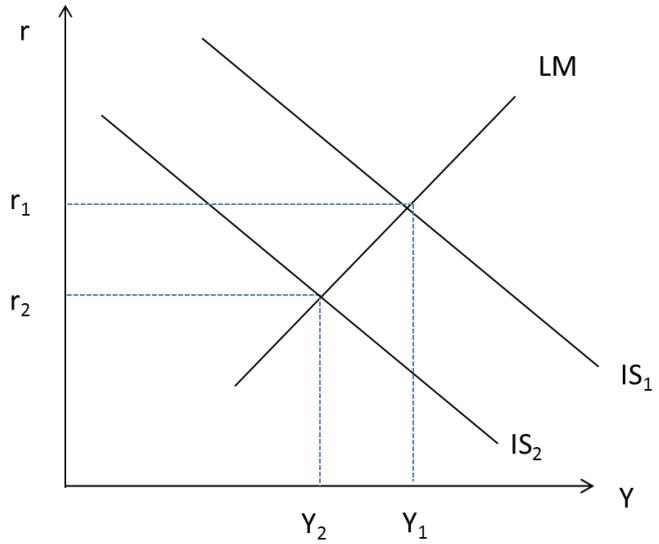

Fig. 4

References

[1] Ancona D G. A new research lens[J]. Academy of Management Review,2001,26(4):645-663.

[2] Gevers J M R, Cleassens B J C. Pacing styles, personality and performance[J]. Time in Organizational Research,2009:80-102.

[3] 'Issues and Challenges in the Fiscal Policy Response to COVID-19', 2020, Macroeconomic Review, pp.102-11.

[4] Government of Singapore, 2021, Budget 2021: COVID-19 Resilience Package, viewed 23 May 2021, <https://www.gov.sg/article/budget-2021-covid-19-resilience-package>.

[5] International Monetary Fund, 2021, POLICY RESPONSES TO COVID-19,viewed 23 may 2021, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#S>.

[6] Mankiw, N. G. (2019). Macroeconomics (Tenth Edition.). Worth Publishers.

[7] Monetary Authority of Singapore, 2021, Monetary Authority of Singapore, Singapore, viewed 23 May 2021, <https://www.mas.gov.sg/>.

[8] Singapore Department of Statistics, 2021, Singapore Department of Statistics, Singapore, viewed 23 May 2021, <https://www.singstat.gov.sg/>.

[9] Zhao,L&Qian J 2020, The First 100 Days of Singapore's Fight Against the Epidemic: Ideas, Measures and Impacts, CIKD-WP-2020-008, center for International knowledge on development, viewed 23 May 2021, <http://www.cikd.org/ fileCache/pdf/2/2_% e6%96%b0%e 5%8a% a0%e5 %9d%a1%e6%8a%97%e5%87%bb%e7%96%ab%e6%83%85-2020708_update--C.pdf>