FEATURE ARTICLE

IMPACT OF THE CIRCUIT BREAKER AND BUDGET MEASURES IN RESPONSE TO COVID-19

INTRODUCTION

In April, the Multi-Ministry Taskforce announced that Circuit Breaker (CB) measures would be implemented to pre-empt the trend of increasing local transmissions of COVID-19. The measures included full home-based learning for schools and the closure of most physical workplace premises. Exceptions were provided for businesses providing essential services and in selected economic sectors which are critical for local and global supply chains. The CB measures from 7 April to 1 June is estimated to have reduced 2020 GDP by 2.2%.

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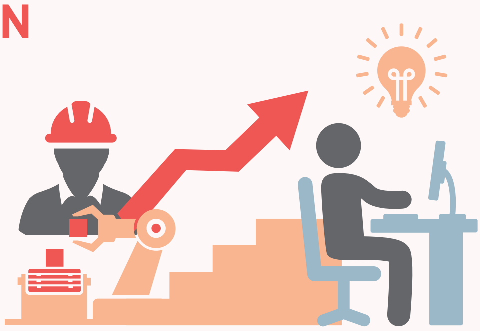
BUDGET MEASURES IN RESPONSE TO COVID-19

The Government has introduced four Budgets this year to fight COVID-19, with a total commitment of $93 billion in economic and social support and public health management measures. The Budget measures are expected to cushion the fall in employment and economic output arising from COVID-19. Specifically, the four Budgets are estimated to avert a loss in real GDP of about 5.5 per cent in 2020.

CONCLUSION

The Unity, Solidary, Resilience and Fortitude Budgets will provide significant support to help firms and workers emerge stronger from the crisis. The four Budgets have supported economic livelihoods and prevented an even more significant disruption to income and cash flows. They also contribute to the longer-term objective of helping viable firms stay afloat and facilitating a quicker recovery. Apart from these economic benefits, there will also be positive externalities from the public health management measures that have been put in place to safeguard Singapore from COVID-19.



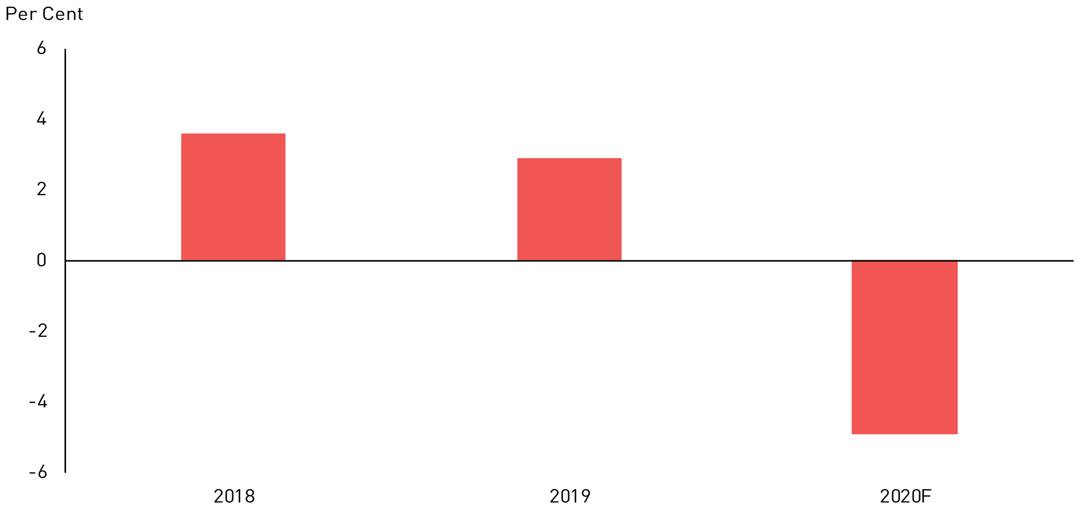
EXECUTIVE SUMMARY

- The COVID-19 pandemic and consequential measures taken to contain the pandemic, including lockdowns and travel restrictions, have adversely affected economic activity globally.
- In Singapore, the Circuit Breaker measures, which were necessary to stem the community spread of COVID-19 and save lives, had a negative impact on the economy. In particular, the closure of most physical workplace premises from 7 April to 1 June, which had affected businesses that could not operate remotely from home, is estimated to have reduced Singapore's annual real GDP by 2.2 per cent.
- The Government has introduced four Budgets this year to fight COVID-19, with a total commitment of $93 billion in economic and social support and public health management measures. The Budget measures are expected to cushion the fall in employment and economic output arising from COVID-19. Specifically, the four Budgets are estimated to avert a loss in real GDP of about 5.5 per cent in 2020, and reduce the rise in resident unemployment rate by 1.7 percentage-points.
- Overall, the four Budgets have supported economic livelihoods and prevented an even more significant disruption to income and cash flows. They also contribute to the longer-term objective of helping viable firms stay afloat and facilitating a quicker recovery. In addition to the economic benefits, there will also be positive externalities from the public health management measures that have been put in place to safeguard Singapore from COVID-19.

1. INTRODUCTION[1]

The International Monetary Fund (IMF) has called the COVID-19-induced economic crisis "an economic crisis like no other", with the pandemic expected to exact a heavy toll on the global economy. In order to control the transmission of COVID-19, many countries have introduced strict lockdowns and restrictions to limit the movement of people, and this has led to significant disruptions in global economic activity. In its June review, the IMF projected that the global economy would contract by 4.9 per cent in 2020[2], a further downgrade from its earlier forecast of a 3.0 per cent contraction [Exhibit 1]. This would represent the worst global economic recession since the Great Depression.

Exhibit 1: Global GDP Growth



Source: International Monetary Fund

1 *We would like to thank Yong Yik Wei, Yip Chun Seng, Peter Lim, Andy Feng, Jamie Poh and Wang Shida for their useful suggestions and comments. We would also like to thank the Monetary Authority of Singapore for providing their invaluable input to this article.*

2 *This is the forecast announced in the IMF's June World Economic Outlook (WEO).*

Given the global economic fallout and also domestic efforts to control the outbreak, the Singapore economy has been buffeted by both demand- and supply-side shocks. In an article in the first quarter Economic Survey of Singapore published in May 2020, MTI explained how the COVID-19 pandemic could be expected to affect the different sectors of the Singapore economy. To recapitulate, there are broadly five categories of sectors that could see varying impact as a result of the outbreak. First, sectors that rely on international travel, including the air transport, accommodation and other tourism-related sectors, have been severely affected by global travel restrictions and border controls put in place to contain the cross-border spread of the virus. Second, consumer-facing sectors such as retail and food services have been badly affected by the cutback in domestic consumption due to the outbreak and safe distancing measures. Third, outward-oriented sectors like manufacturing and wholesale trade have been affected by the fall in external demand and supply chain disruptions. Fourth, domestically-oriented sectors such as real estate have been affected by negative spillovers arising from the downturn in the domestic economy. Fifth, the construction sector and the marine & offshore engineering segment of the manufacturing sector have experienced severe manpower disruptions due to the COVID-19 outbreak in the foreign worker dormitories, and subsequent isolation and testing of affected foreign workers. Physical workplace closures arising from the Circuit Breaker (CB) measures were also expected to have an impact on most sectors of the economy.

In this article, we specifically examine the economic impact of the CB measures, which entailed the closure of most physical workplace premises (thereby affecting businesses which could not operate remotely from home) in order to control the local transmission of COVID-19. While the CB measures were necessary to protect and save lives, they further dampened domestic economic activity and led to a steeper decline in domestic consumption. To mitigate the economic impact of the CB measures, the Government announced the Solidarity and Fortitude Budgets in April and May respectively, to provide direct assistance to affected business and workers. These were in addition to the measures already announced in the Unity and Resilience Budgets in February and March to cushion the economic impact of the pandemic.

The next section describes the impact of the CB measures on the Singapore economy, while sections 3 and 4 describe the mitigating effects of the Budget measures.

2. IMPACT OF THE CIRCUIT BREAKER MEASURES

On 3 April, the Multi-Ministry Taskforce announced that CB measures would be implemented to pre-empt the trend of increasing local transmissions of COVID-19. The objective of the measures was to significantly reduce movements and interactions in public and private places. The CB measures included full home-based learning for schools and the closure of most physical workplace premises. Exceptions were provided for businesses providing essential services and in selected economic sectors which are critical for local and global supply chains. Work and business activities that could be carried out remotely from home were allowed to continue. The CB measures took effect on 7 April, and were subsequently tightened on 21 April with the closure of more physical workplaces to further reduce the share of workers who had to commute daily to work, from around 20 per cent to around 15 per cent. In view of the serious public health situation, the Multi-Ministry Taskforce also announced on 21 April that the Government would extend the period of CB measures until 1 June. The tightened CB measures were progressively eased from 5 May onwards, to prepare for the safe and gradual resumption of economic and community activities after the end of the CB measures on 1 June.

Using data gathered from MTI's GoBusiness portal and administrative data on businesses, we obtain an estimate of the annual value-added (VA) of businesses that were not allowed to operate onsite during (i) the first 2 weeks of the CB period from 7 April to 21 April, (ii) the subsequent 2 weeks of tightened CB measures from 22 April to 4 May when more physical workplaces were required to close, and (iii) the last 4 weeks of CB measures from 5 May to 1 June when the tightened measures were gradually eased to prepare for the safe reopening of the economy after the end of the CB. In our estimation of the impact of the workplace closures, we assume that even though these firms were not allowed to operate onsite, their workers who were able to telecommute would continue to be productive.[3] The economic impact of the CB measures is then approximated by the estimated VA lost by these businesses due to their inability to operate at their physical workplace premises for each of the periods described above.[4] It should be noted that these estimates do not include the impact of sector-specific restrictions that remained in place after 1 June, such

3 *For modelling purposes, assumptions were made on the share of workers that could telecommute in each sector.*
4 *The estimated VA lost assumes that the businesses would have generated VA if not for the workplace closures during CB. However, the VA levels that these businesses would have generated is unlikely to be the same as what they would have generated in a situation without COVID-19. As such, in estimating the VA lost, we first took into account the economic impact of COVID-19 on the VA of the different sectors before layering on the impact of the CB workplace closures.*

as the later resumption of retail activity at physical outlets and dining-in services on 19 June[5], as well as the delay in the restart of construction and marine & offshore engineering activities due to the COVID-19 outbreak in the foreign worker dormitories.

Our estimates show that the CB measures had a significant impact on the Singapore economy. In total, the closure of physical workplaces from 7 April to 1 June is estimated to have reduced Singapore's annual real GDP by 2.2 per cent. In nominal terms, the total economic cost of the CB measures to the Singapore economy is estimated at around $11 billion [Exhibit 2]. As a share of the quarterly real GDP in the second quarter of last year, the impact works out to be around 8.9 per cent.

Exhibit 2: Estimated Impact of CB Measures

Impact on economy	Period of measures			Total
	7 Apr to 21 Apr	22 Apr to 4 May	5 May to 1 Jun	
Economic cost in terms of nominal GDP ($m)	-2,851	-2,906	-5,505	-11,262
As a percentage of annual real GDP (%)	-0.56	-0.57	-1.08	-2.22

Source: Authors' Estimates

The impact of the CB measures was felt across all sectors. Some sectors were more adversely affected as more of their businesses were either non-essential or could not be conducted remotely. These sectors included the construction, business services, accommodation & food services, and transportation & storage sectors. Meanwhile, sectors such as finance & insurance and information & communications were less affected as many of their activities could be carried out remotely. The impact on the manufacturing sector varied across firms, as exemptions were provided for key manufacturing firms and their suppliers that are critical to local and global supply chains. These included key firms and activities in the electronics, biomedical manufacturing, transport engineering and chemicals clusters within the manufacturing sector.

In response to the severe disruptions caused by the COVID-19 pandemic and the CB measures implemented to contain local transmission of the virus, the Government introduced the Unity, Resilience, Solidarity and Fortitude Budgets in 2020, with the Solidarity and Fortitude Budgets providing direct assistance to businesses and workers affected by the CB measures. The next section discusses how the fiscal measures will help to cushion the impact of the COVID-19 pandemic and enable our businesses and workers to emerge stronger from this crisis.

3. OVERVIEW OF BUDGET MEASURES

The Government introduced four Budgets from February to May this year. With the Unity, Resilience, Solidarity and Fortitude Budgets, a total of $93 billion, or 19.2 per cent of Singapore's nominal GDP, has been set aside to fight COVID-19. The focus of the Budgets has evolved in response to changing needs as the COVID-19 pandemic developed. In February 2020, when we first announced the **Unity** Budget, COVID-19 was relatively contained within China, and there had not yet been widespread transmission elsewhere. In the Unity Budget, we had thus focused our efforts on emergency preparedness, with resources directed to public health management and ensuring our supplies were secure. By April 2020, COVID-19 had been declared a global pandemic by the World Health Organisation (WHO) and we entered the CB period on 7 April 2020. In view of the acute economic impact on companies, workers and households, the **Resilience** and **Solidarity** Budgets focused on helping companies and saving jobs, as well as providing social support to households, to cushion the impact. Towards the end of CB, we shifted focus to preparing for a safe re-opening from June, where we would transit to a new normal while keeping the community spread of the virus contained. We announced the **Fortitude** Budget on 26 May 2020, where we continued to provide critical support to workers and firms, but with an eye on emerging stronger and finding new jobs in growth areas for affected workers.

5 *The additional impact of the slower resumption of retail and dining-in services is small (around 0.03 percentage-point reduction in annual real GDP). The retail trade and food services segments contributed to only 1.6 per cent and 1.2 per cent of Singapore's nominal GDP respectively in 2019.*

The COVID-19 pandemic is a crisis unlike any we have seen. Safe management measures in Singapore and around the world, aimed at reducing the transmission of the virus and saving lives, have inevitably resulted in a sharp slowdown in economic activity. This means that the usual economic playbook – using fiscal stimulus to encourage economic activity – has to be adjusted.

In summary, the measures unveiled in the four Budgets aim to do the following:

a. First, our economic response has to **work hand-in-hand with public health measures**. A safe re-opening would ensure sustained business activities (as opposed to recurring waves and lockdowns), build confidence and mitigate precautionary savings. Businesses which are unable to open are supported and helped to transform. Public health measures, where there are positive externalities (e.g., testing of higher-risk persons, provision of masks), are also subsidised.

b. Second, we have to ensure that this "crisis of a generation" does not become a "crisis for a generation". Long-term structural damage to our society and economy has to be avoided. This means that we have to ensure that we **preserve our key corporate and strategic capabilities**, and that our workers, even if temporarily displaced, can find opportunities for **continued human capital development**. We also have to ensure that we do not laden our future generations with unsustainable debt.

c. Third, as COVID-19 has accelerated our structural transformation (e.g., in areas such as digitalisation, innovation and skills training), our measures aim to help businesses and workers use this period to **accelerate structural changes**.

d. Lastly, as COVID-19 has had an uneven impact on sectors and workers, we have to **address the distributional aspect** of the crisis with differentiated tools. The hardest-hit sectors like the aviation and tourism sectors have been provided with higher levels of support. More support is also given to mid-career workers and lower-income workers as they are harder-hit during the crisis. Social support is also directed at households more in need.

The details of the Budget measures can be found in the various Budget statements. Key measures across the four Budgets are described below:

a. For **firms**, measures include enterprise financing schemes to help them maintain access to credit amidst heightened uncertainty in the credit market. Rental relief is also given, with more given to sectors more affected. In addition, incentives to kick-start technology adoption and transform businesses have been provided. This includes up to 90% subsidies for productivity solutions under the Enterprise Development Grant and Productivity Solutions Grant, as well as up to $10,000 cash grant under the Digital Resilience Bonus for taking up IT solutions.

b. For **workers**, measures include the Jobs Support Scheme (JSS), which provides up to 75% support on the first $4,600 of monthly wages for 10 months, to help retain jobs. The SGUnited Jobs and Skills package will also provide 100,000 job, traineeship and skills upgrading opportunities. As part of the skills upgrading programmes, a training allowance during the course of the training and job placement support are provided. For Self-Employed Persons (SEPs), they will benefit from the SEP Income Relief Scheme (SIRS), which provides $1,000 cash payout per month for 9 months, and the SEP Training Support Scheme.

c. For **households**, the direct cash transfers (e.g., $600 Solidarity Payment and Care and Support Package – Cash, Workfare Special Payment) and social assistance schemes (e.g., Temporary Relief Fund and COVID-19 Support Grant) provide immediate relief, especially to those who have seen a loss in income or jobs. A greater proportion of cash transfers is provided to lower-income households.[6]

6 *Doing so will also generate higher multiplier effects as lower-income households have higher marginal propensities to consume.*

4. ESTIMATED IMPACT OF BUDGET MEASURES

While it is still too early to assess the long-term impact of the Budget measures, we attempt to estimate the impact of the Budgets on the Singapore economy based on the size of the fiscal injections and the fiscal multipliers, which are in turn affected by the composition of the measures.[7]

Our preliminary analysis would not be able to account for many factors. First, it would not be able to take into account the longer-term impact of the pandemic. In particular, a crisis of this scale would likely cause some level of hysteresis and economic scarring for many economies. The US and EU took 6 years to about a decade respectively for their labour markets to recover to what they were like prior to the Global Financial Crisis. Effective short-term management, however, could avoid long-term impairment. Second, the impact of the four Budgets may not be felt immediately, as there may be transmission lags, especially against an uncertain economic backdrop. For instance, notwithstanding the transfers to households, the impact on consumption may not be immediate as there were significant restrictions on dining-out and making of purchases in-store during the CB. The impact on consumption should see some pick-up in the post-CB period. Third, the fiscal multiplier could also be dampened by the current uncertain economic environment, with precautionary savings holding back consumption and investments.

In consultation with the Monetary Authority of Singapore (MAS), we estimate that the four Budgets for 2020 would help to reduce the rise in resident unemployment rate by 1.7 percentage-points this year, with effects persisting into next year [Exhibit 3]. A large part of this is expected to be driven by the jobs-related measures, such as the JSS, which alone is estimated to contribute an expected 0.9 percentage-point reduction in the resident unemployment rate this year. We also estimate that the four Budgets could avert a loss in real GDP of about 5.5 per cent in 2020. This implies that, without the Budget measures, the economy could have contracted by a larger magnitude.

Exhibit 3: Combined Macroeconomic and Labour Market Impact of the Four Budgets[8]

Impact on economy	2020	2021
Real GDP level (percentage deviation)	+5.5	+4.1
Resident unemployment rate (percentage-point deviation)	-1.7	-2.9

Source: MAS Estimates[9]

Overall, the four Budgets have supported economic livelihoods and prevented an even more significant disruption to income and cash flows. They also contribute to the longer-term objective of helping viable firms stay afloat and facilitating a quicker recovery. Apart from these economic benefits, there will also be positive externalities from the public health management measures that have been put in place to safeguard Singapore from COVID-19.

5. CONCLUSION

The COVID-19 pandemic and consequential measures to contain the pandemic, including lockdowns and travel restrictions, have adversely affected economic activity globally. In Singapore, the CB measures, which were necessary to reduce the community spread of COVID-19 and save lives, had a negative impact on the economy. In particular, the closure of most physical workplace premises from 7 April to 1 June, which had affected businesses that could not operate remotely from home, is estimated to have reduced Singapore's annual real GDP by 2.2 per cent.

The Government's strong response to the economic fallout of the outbreak, in the form of four Budgets announced between February and May, is expected to cushion the fall in employment and economic output arising from COVID-19. Taken together, the four Budgets are estimated to reduce the rise in the resident unemployment rate by 1.7 percentage-points, and avert a real GDP loss of about 5.5 per cent, in 2020.

7 *The fiscal multiplier measures the impact of discretionary fiscal policy on output. In other words, it is defined to be the effect of a $1 change in spending or tax revenue on the level of real GDP.*
8 *The impact reported here refers to the deviation from a counterfactual scenario in the absence of Budget measures.*
9 *Simulations are performed using MAS' Monetary Model of Singapore, which is a macro computable general equilibrium model that is used to analyse policy effects dynamically at both the economy and sector levels.*

Overall, the four Budgets have supported economic livelihoods and prevented an even more significant disruption to income and cash flows. They also contribute to the longer-term objective of helping viable firms stay afloat and facilitating a quicker recovery. Apart from these economic benefits, there will also be positive externalities from the public health management measures that have been put in place to safeguard Singapore from COVID-19.

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